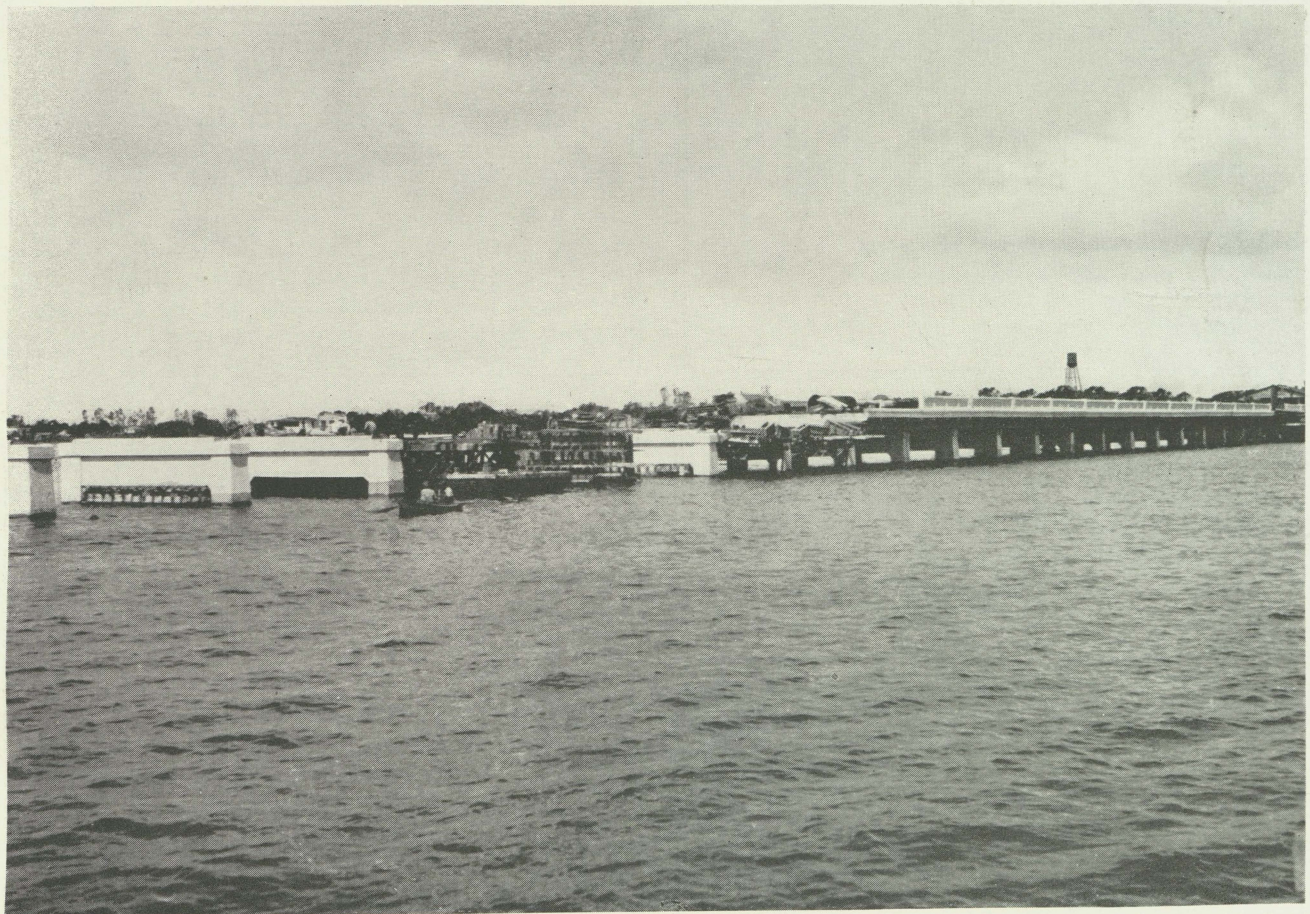


# FLORIDA HIGHWAYS

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Manatee River Bridge Between Bradenton and Palmetto—Showing Progress of Construction

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**Vol. III**

**OCTOBER, 1926**

**No. 10**

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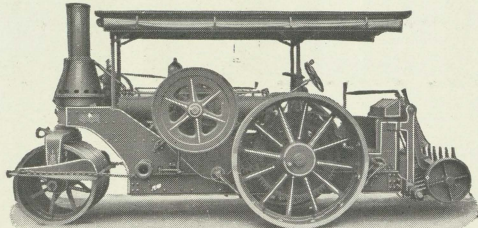
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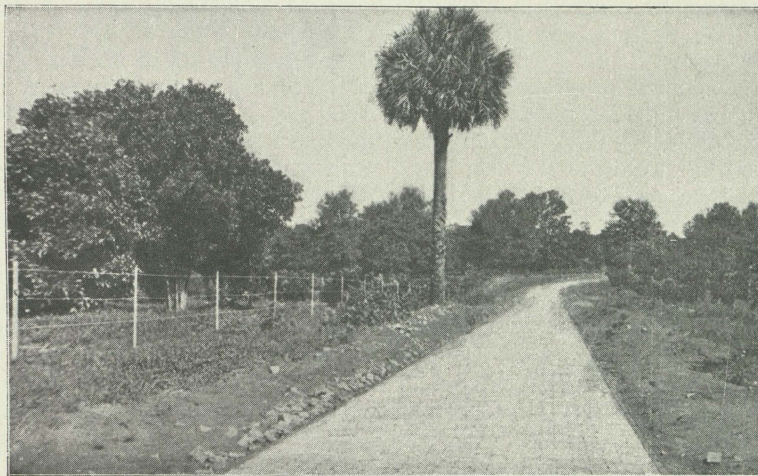
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# FLORIDA HIGHWAYS



Vol. III

OCTOBER, 1926

No. 10

## What the Congress Thinks

Reasons Advanced by the Senate and House of Representatives for Federal Participation in Highway Construction

(From American Highways Magazine)

THE Congress during the session recently closed extended Federal obligations in funds for road construction to June 30, 1929. This is in furtherance of the plans of the Federal Highway Act of November 9, 1921, wherein the National Government entered into agreement with the several States to co-operate in the construction of a definite system of highways.

Since the passage of the Federal Highway Act the Congress has not devoted much time to discussion of the subject on the floors of Congress, but has made authorizations for appropriations upon the arguments adduced before the Senate and House through extensive hearings.

However, this year considerable time was given, following hearings, to develop the arguments in open session. It is believed that excerpts from these discussions are very informative as to the attitude of the Congress on this subject, and to this end we are, therefore, presenting our readers with paragraphs taken from these arguments, arranged by subjects, together with a brief statement showing the historical setting of previous legislation.

### Legislation to Date

Some years ago Congress took up the subject of a national highway system, and since that time there has been a vast improvement in the construction and use of the highways. In 1912 a joint committee was appointed, composed of members of the Senate and

members of the House of Representatives, to investigate and report on the subject of what part, if any, the Federal Government should take in the construction of roads. This committee made a careful investigation of the subject, and reported its findings to the House and Senate in 1915. As a result of this investigation and report, Congress enacted legislation providing for Federal aid in the construction of highways.

The first legislation was enacted and approved July 11, 1916. This legislation provided for a five-year program and provided for an appropriation of \$75,000,000. Five million dollars became available the first year; \$10,000,000 became available the second year; \$15,000,000 became available the third year; \$20,000,000 became available the fourth year; and \$25,000,000 became available the fifth year.

The next legislation was passed in February of 1919 and carried an appropriation of \$200,000,000, covering a period of three years. The first \$50,000,000 became available immediately; \$75,000,000 became available for the fiscal year ending in 1920; and \$75,000,000 was available for the fiscal year ending June 30, 1921. Up to this time the action of the Government in aiding the States in the construction of roads was largely experimental.

In 1921, after a careful investigation and consideration of the whole subject, legislation was enacted providing for a comprehensive program of Federal aid in the construction of highways. This



legislation provided for a program of road construction throughout the entire nation, embracing 7 per cent of the roads in each State, and this 7 per cent aggregates approximately 200,000 miles of primary and secondary roads. This act established for the first time a definite Governmental policy and program for co-operation with the several States in the construction and maintenance of a national highway system. Seventy-five million dollars was authorized for this work in the first year.

In 1922, following the general program outlined, Congress authorized the expenditure of \$50,000,000 for the fiscal year ending June 30, 1923; \$65,000,000 for the fiscal year ending June 30, 1924; and \$75,000,000 for the fiscal year ending June 30, 1925.

In 1925 Congress authorized the expenditure of \$75,000,000 for the fiscal year ending June 30, 1926, and \$75,000,000 for the fiscal year ending June 30, 1927. The present bill provides for an authorization for the fiscal years ending in 1928 and 1929. Briefly, this is a review of all of the moneys authorized and appropriated by the Government for Federal aid in the construction of good roads under the Highway Act.

Under the present law the Federal Government apportions these appropriations to the several States, and these funds are used in the construction of roads approved by the Secretary of Agriculture. Federal participation can not under the law exceed 50 per cent of the cost of construction of the roads or exceed \$15,000 per mile.—Representative C. C. Dowell, Iowa.

Under authority of an Act of Congress of August 24, 1912, and continuing Acts of March 4, 1913, and March 9, 1914, a joint committee, consisting of five Senators and five Representatives, was created and authorized to investigate the subject of Federal aid in the construction of post roads. This committee after very thorough investigation submitted its report to the Senate and House in January, 1915, favoring Federal aid and setting forth its reasons. The Hon. Martin B. Madden, of Illinois, the present distinguished chairman of the Appropriations Committee, and Hon. Robert Gordon Lee, of Georgia, were members of that committee. I wish to take this opportunity to congratulate our colleagues for their distinguished service in behalf of good roads and in behalf of the nation.

These gentlemen turned out to be not sons of prophets but prophets themselves, because everything they declared has come true. I want here to express my appreciation, after these years, for the wonderful service these men rendered to the cause of good roads and to the nation as a whole.—Representative J. M. Robson, Kentucky.

In 1915 there were only 31 State Highway Commissions. Today there is a working, active State Highway Commission in everyone of the 48 States. In 1915, the year before we began national aid to roads, there were only 249,291 miles of improved roads in the United States. Now there are 467,933 miles, an increase in ten years of 210,612 miles of improved roads. In 1915 there was expended \$240,263,784 in all of the States in road improvement, and ten years later, in 1925, the sum went from \$240,263,784 to \$1,176,000,000, a gain of \$936,736,216.—Representative E. B. Almon, Alabama.

#### **Beneficial to all States**

There is, in my opinion, no other appropriation of the same amount that we make which is of as much

benefit to as many people as that we make for road construction. So let us continue to make these appropriations as long as they are needed and demanded by the people.

The Congress is certainly committed to the completion of the 200,000 miles in the 7 per cent roads which have been selected and designated by direction of Congress.

Without Federal appropriations it would be extremely difficult to obtain a connected system of interstate highways. Without Federal appropriations the great task just completed of numbering the Nation's highways and of providing uniform traffic and directional signs would have been long delayed. Without Federal appropriations the vast sum of knowledge made available through co-operative traffic and research studies would have been still lacking.—Representative E. B. Almon, Alabama.

Some of the larger cities, or some of the wealthier States may contend that under this system of road building that particular city or State is paying more than its just proportion of taxes for road purposes. It may be paying out more money than it is receiving, yet these roads are bringing into that city, or that State, the products and necessities of life from the States receiving this benefit. The mines, and the agricultural fields of the West, in many instances, are sending their products to such cities and such States. Life insurance companies, banking institutions, manufacturing establishments, and other institutions receive much of their profits from States other than their own. And many of the stockholders, and others contributing to the profits of these institutions, are residents of other States. And it is just and equitable that these wealthier centers should contribute their pro rata part in the way of taxation to this Federal-aid system of road construction. I hope that this bill continuing the appropriation of Federal aid to the States for road construction will pass without opposition. I also hope that many more such appropriations will be made extending the life of this system for years to come.—Representative Frank Gardner, Indiana.

So, Mr. President, it is not a local matter, as the Senator from Pennsylvania would have the Senate believe. The most of this money spent in the States, as the Senator says, is for interstate roads. It is very well understood, where these great national highways have been constructed, that the travel over those roads originates to a very large extent in States other than the State in which the road is located. The contribution by the Government, therefore, is for the purpose of aiding interstate transportation, through the various States of the Union. The roads, therefore, have the same relation to the public interest that the waterways of this country have to the public interest. Some of the waterways that are improved by the Federal Government are local in their character, but all connect with interstate highways. In the main, the waterways that are improved by the Government are of interstate importance. The two things are upon a parity. If the Government has authority, and if the Government is justified as a matter of policy in aiding the improvement of which to build an empire, and get out of the State, and we will take care of the situation; the Federal Government need not appropriate a dollar for Idaho for public roads or anything else; but until that shall be done, until we shall have a people out there who





Project 421—St. Mary's River Bridge, Road 3—View of Swing Span. This Bridge Connects Georgia and Florida on the Coastal Highway

*grace for an Eastern Senator and for the Eastern States, who have accumulated so much wealth largely by the exploitation of the West, to deny an opportunity of development to the West. \* \* \**

The States are not the only users of these roads. The Federal Government has become in recent years a great user of our highways. Years ago, before we introduced the rural mail system, and before we adopted the parcel post system, the Government used these roads only to a very limited extent for postal purposes, but now there is not a road of any importance—certainly there is not an interstate road in the United States—that is not used extensively by the Government for the purpose of distributing its rural mail and for the purpose of distributing parcel post throughout the rural districts of the country. The Government, therefore, not only contributes to the use to which these roads are put, but the Government contributes to wearing out these roads. It makes it necessary for the local authorities to spend more money for the maintenance of these roads after they have been constructed. The Government contributes to the construction of the roads, but the Government does not contribute to their maintenance. The Government is in part responsible for the necessity of the heavy expenditures for maintenance.—Senator F. M. Simmons, North Carolina.

#### State Rights Not Impaired

Anyone who would speak disrespectfully of any State simply writes himself down as Dogberry wrote can build roads in order to develop not only Idaho

but America, *it seems to me that it comes with poor himself down when he was particularly disgusted with life. But no State-rights doctrine that I have ever heard asserted has undertaken to say that interstate commerce should not flow freely from one State to the other. A State boundary had nothing to do with that. This country is one country. Industrially, economically, politically, it is one country. The latter clause must, of course, be limited by the fact that there are certain political rights reserved to the States, or, rather, not conferred upon the Federal Government and which the States therefore retain. That is not the question we are discussing. The whole question here is whether the Federal Government has the right in justice, for it unquestionably has the power, to take out of the general revenue some money to aid in the general development of highways in the country which the Government will use for post roads. As to the right or power there is no question, and I cannot see any merits in the argument the Senator is now advancing.*

Let me illustrate. My State was very slow to enter upon the road-building program. The history back of that I need not go into. We are now expending probably \$130,000,000 in the construction of highways, and we have only fairly begun. But there are other States contiguous to Missouri which are not yet expending anything like such large sums of money. We are willing to build our roads. We are willing to accept such Federal aid as comes, and we are willing, if we are paying a little more tax than we ought to into the common fund estimated by the

(Turn to page 5)





## Florida Highways

Published Monthly  
Official Publication of the State Road Department

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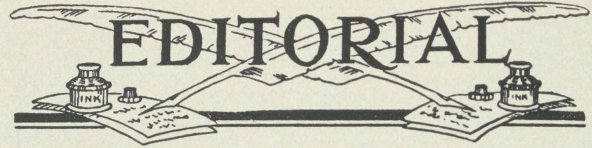
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B. A. Meginniss, Attorney for the Department,  
Editor and Business Manager

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## Right Kind of Roads

COMPARISON of the Florida road system with that of other States puts this State far out in front. Occasion for weighing the advantages of the roads of Florida is furnished by trips through States of the North to see what is being done in other parts of the country. Florida stands first in the quality of roads she is building. The reason for this is that the highways of Florida are being built in accordance with the requirements of safety and convenient travel. Instead of winding roads, Florida is building them straight. Instead of so many railroad crossings the State Department is eliminating them wherever possible. Instead of narrow roads so common in many other States, these now under construction are wide. Instead of restricted rights of way, ample provision is being made in Florida to give enough room to build a road wide enough to support it against heavy travel and to make it safe, as well as to beautify it.

Too much emphasis cannot be put upon the necessity of building roads right. Money will be saved, and a motorist when he sets out upon roads that are constructed after the most approved manner of building, will be assured that he has a safe road ahead of him. That means a great deal to the traveler, as well as to the traffic carrier.

Some objection has been voiced to the selection of new rights of way, it being argued that an old right of way will suffice. This policy is shortsighted, and an examination of the facts will quickly and effectively show it to be so. Florida is now in the stage of starting a great development of her back country through which byroads and winding paths have been the means of transportation. This situation offers the opportunity to build straight and wide roads to cut off distance, to avoid dangerous curves, to eliminate crossings and to provide the shortest and most direct routes between central and important points. The development that is to come will follow their course. Necessarily, roads that already serve important towns will not be changed, nor is it advisable that they be re-routed when they serve the purposes of fast traffic. But wherever new roads are to be built, it is only common sense that the routes be chosen which will best meet the demands and conform to up-to-date construction. The State Department is proceeding upon sane and correct principles of road-building in its routing of roads to serve the greatest number of people with the most direct course.

It is due to the recognition and application of these modern principles of road building that Florida can point to the construction of an up-to-date system which is placing her in the forefront and making her roads the peer of those to be found anywhere, and far superior to most of them.—Jacksonville Journal.



**WHAT THE CONGRESS THINKS**

(Continued from page 3)

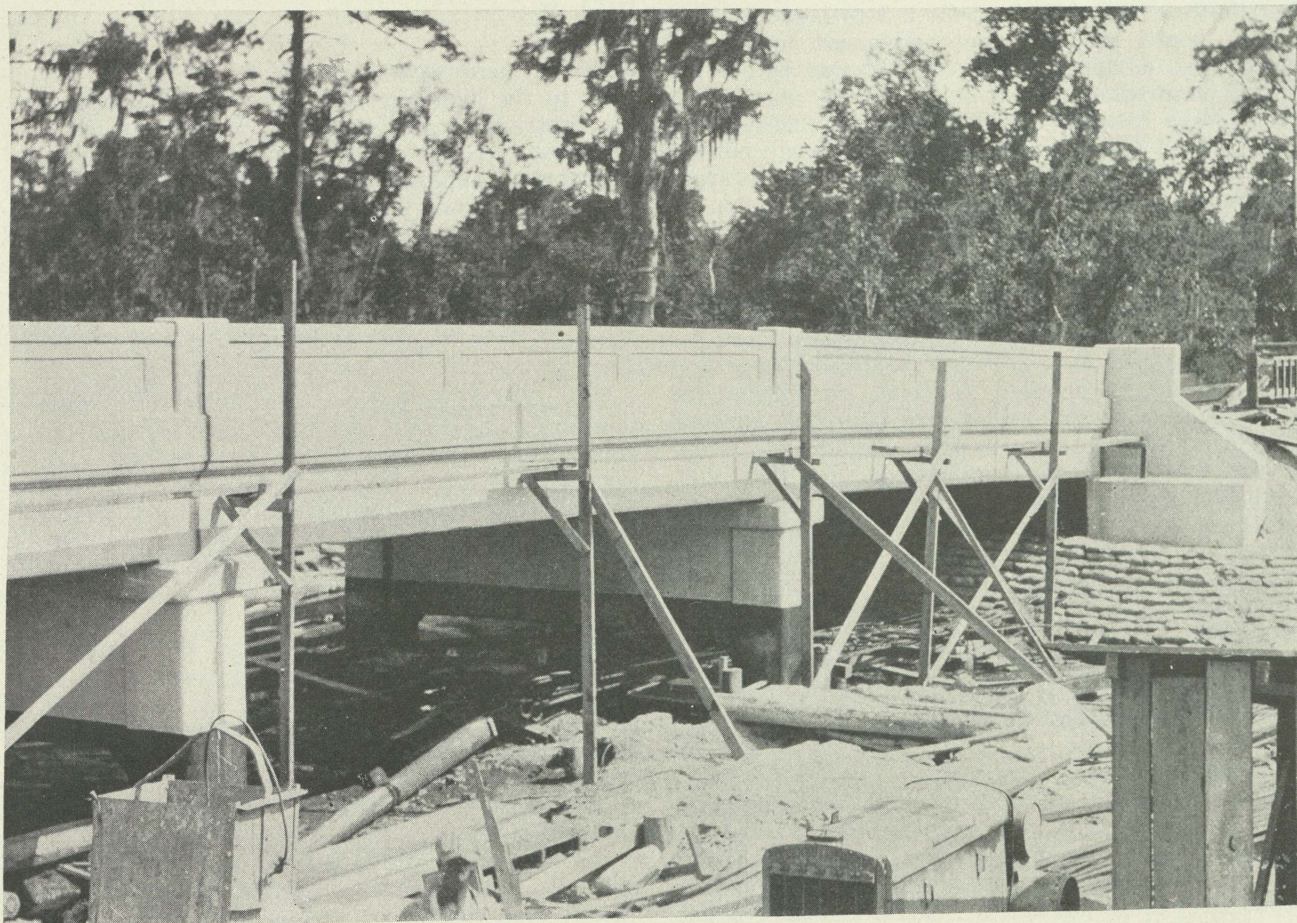
amount we are getting out of it, to continue to pay it in order to aid other States that may be backward, because these highways are essential to the development of the United States of America. *If we were ever to have another war, perhaps the single greatest asset in that war would be found in the ability of the Government to mobilize troops from every part of the United States within a few hours' time over the splendid highway system which is being constructed.*—Senator J. A. Reed, Missouri.

Some of the Northern and Eastern States have heretofore complained about the authorization for public highways. We expended about \$400,000,000 in building the Panama Canal. We have expended for rivers and harbors \$1,200,000,000, a sum nearly double that we have authorized for the construction of roads, but in the river and harbor appropriations the Federal Government has borne practically the entire cost, while in the construction of the highways the Federal Government has not borne one-half the cost. And let me point out further that the greater amount of this river and harbor appropriation was expended in and about the States that have protested against Federal aid for roads, and many of the States that have only recently been receiving contributions for roads have been contributing in taxes for more than 100 years for river and harbor improvements in the so-called rich States of the Nation. *I am not*

*taking a provincial view. I want to see the Nation developed as a whole, and to do this we must have a sane and economic program of highway and river and harbor improvement and development throughout the Nation.*—Representative J. M. Robsion, Kentucky.

I have gone over the payments into the Treasury from the several States, and I have picked out some outstanding illustrations, and I want to bring them to the attention of the House and again give you my logic on the subject to show it is fair even under those circumstances.

North Carolina, for instance, pays into the Treasury of the United States about \$167,000,000 a year. South Carolina pays in only \$6,000,000; and yet when you find out what Federal aid they receive, you find that South Carolina receives nearly as much as North Carolina. South Carolina receives \$1,250,000 a year and North Carolina about \$1,750,000 a year, and yet North Carolina pays into the Treasury about thirty times as much as South Carolina. Now is this fair? Let us analyze and see where North Carolina gets the money that she pays into the Treasury. You will find down there the principal business is tobacco, and this State pays \$151,000,000 in tobacco taxes. The manufacturers down there put up tobacco in forms of cigarettes and in package form, and the Government requires that on each one of those packages you must have a stamp, and that stamp costs considerable money. All these packages are sent out all over the United States by the manufacturer, and



Project 421—Bridge Over St. Mary's River, the Line Between Georgia and Florida. This View Shows Three Concrete Spans and the Florida Abutment



does that manufacturer absorb the cost of that stamp himself? We all know he does not. He would break up if he did. He sends that package all over the United States with the tax added, and then everybody who smokes cigarettes or uses a package of tobacco contributes to the fund that comes back into North Carolina and is sent in to the Treasury of the United States, and North Carolina gets the great credit of paying \$167,000,000 into the Treasury of the United States. Why, gentlemen, North Carolina is just a collector of taxes; that is all. All the people are paying that tax all over the United States.

Let me take another illustration I find up in Michigan. Michigan pays \$193,000,000 a year into the Treasury. Indiana, her sister State, pays only \$38,000,000. Yet each of these States receives about \$2,000,000 Federal aid for roads. Is that fair? When you analyze the money paid by the State of Michigan into the National Treasury, you find that there is the State where the automobiles are made; and when you buy an automobile, you will find on your bill so much for national taxes, and you pay that before you get the machine. That is a part of its cost. So everybody who jumps over the roads in a Ford all over the United States or rides in a Cadillac contributes to that sum, which Michigan turns into the National Treasury. Michigan is a collector of taxes from all over this broad country.—Representative Charles Brand, Ohio.

#### A National Problem

I represent in part one of those States which receives back for roads perhaps 20 per cent of what it contributes. I think it is about a 5 to 1 proposition. I have heard the arguments advanced today and which were advanced when the bill was before the Senate on previous occasions during the past seven years. Very frankly, I have never been able to agree with them. I recognize the justice—no; I will not use the word “justice.” I recognize a basis for an argument; but, in my judgment, in the distribution of Federal funds the fundamental principle which should interest us should be what are they to be used for. *I believe a wealthy Government, made up of wealthy States and of other States not so wealthy, can well afford to contribute for the general good for some projects. I have always considered the project of good roads in precisely the same category as the projects of improved rivers and improved harbors.* They are both, of course, systems of highways, either by water or over land. I go even further than that. I consider the development of a road system throughout the country of more importance in the inaccessible States, if I may describe them in that manner, and such activity to nearer the great responsibility of public defense than perhaps would be any other expenditure of the Government not directly devoted to the Army and Navy. Military roads—we term them “post roads”—in my judgment are an auxiliary to the public defense.—Senator W. E. Edge, New Jersey.

Before the Act of 1921 counties were matching Federal funds. The rich counties that needed the roads least were matching Federal funds and adding to their highways. The poor counties that needed the roads most could not match Federal funds. Furthermore, we did not have any unified system. We were building little patches of roads in various counties,

and then these were neglected and permitted to go to pieces. Under the Act of 1921 the forty-eight States having submitted their proposed systems to the Department of Agriculture and the Bureau of Roads being under that department, with the Secretary of Agriculture, they have viewed the Nation as a whole and have laid out a great system of interstate and intercounty highways, so that these great continental lines are being built through the poor States and through the poor counties as well as the rich States and rich counties, forming a splendid, co-ordinated, united system. The motorist, when this system is completed, will know nothing about county lines and will be scarcely able to discern State lines.—Representative J. M. Robsion, Kentucky.

When I stated the legitimate business of Government to protect life, liberty, and property, I included highways, which have always been the particular objects of promotion and control by governments since the days of the Pharaohs. Highways have been built and controlled by governmental agencies. We are not here multiplying legislation. We are here proposing in one bill to spend some of the Government's money that will result in about a 100 per cent benefit to the people. It is about the only case I know of where, when money is expended, the people get the whole benefit of the expenditure of the money; and all persons get it alike. *There is no more doubt about the fact that the Government of the United States has the power to appropriate money to build highways in this country than there is that it has the power to appropriate money to pay the salary of the President of the United States.*—Senator J. A. Reed, Missouri.

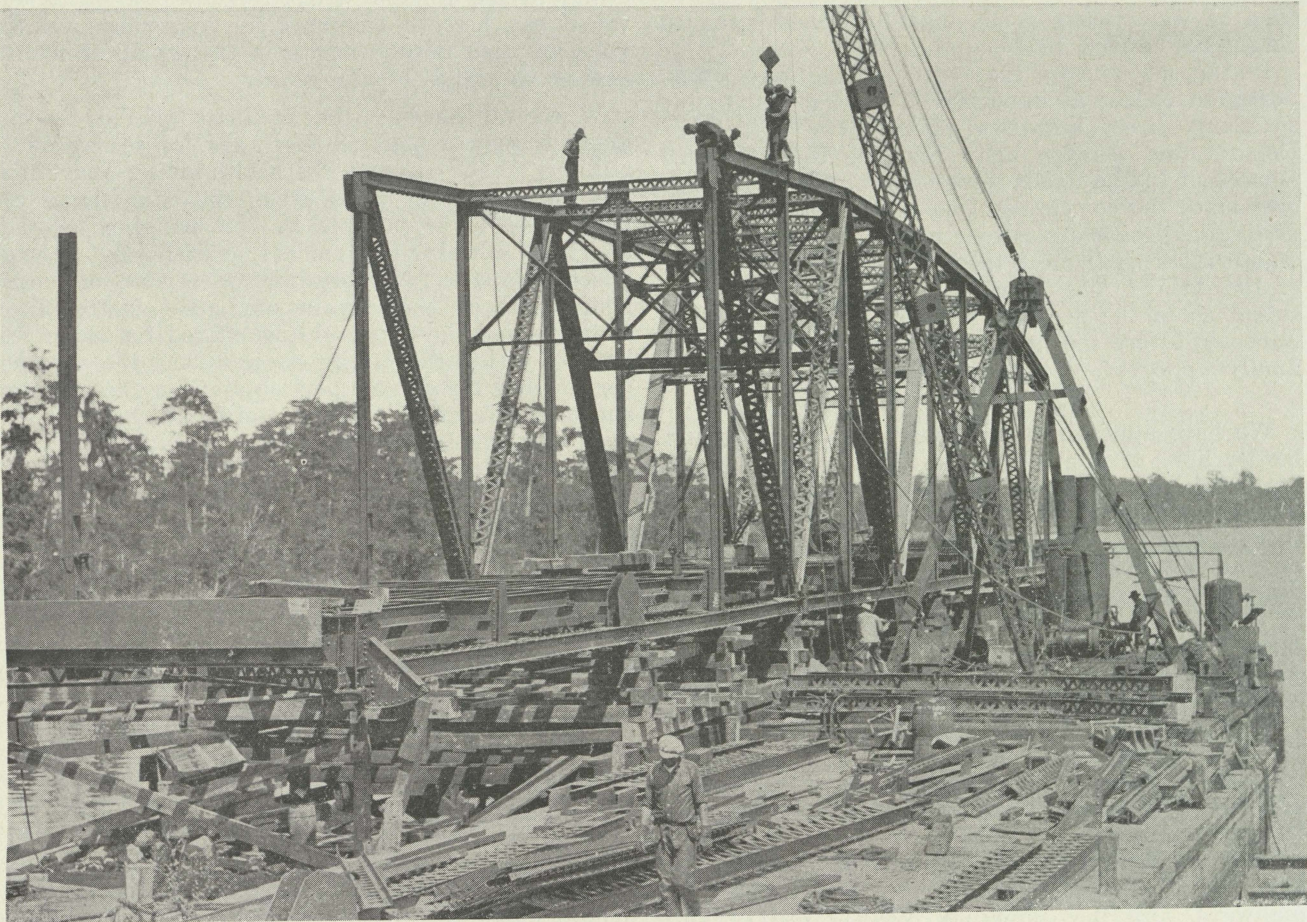
While there have been times, places, and conditions in the history of our country when and where the doctrine of local self-government was not only sufficient but was and may yet be clearly the most appropriate and best doctrine for the needs of the people, yet now it would seem that in highway building and regulating the bigger and more general governments may function best to give the people what they need to meet the progress and requirements of the times.—Representative W. H. Sproul, Kansas.

The spirit of early times relating to road construction largely held that each State, county, and locality must provide its own money by whatever plan of taxation they saw fit to adopt. The need of more permanent and rapid construction to meet the crying demands led to the invention of numerous plans of taxation for both building and maintaining the public road system. I believe one of the fairest plans is that of the gasoline tax.

The machine passing through a State and using the highways consumes gasoline in proportion to the mileage traveled, and assuming, of course, that all gasoline tax is paid into the proper treasury, the owner only contributes a small amount of his tax to assist in maintaining the kind of roads he finds it a pleasure to use. *Our road taxes give us as good returns in profit and pleasure as any we pay. Good roads reduce our cost of upkeep, which has been very heavy because of bad conditions existing not only in neighboring States but within our own bailiwick.*

The public-spirited, big organizations have persistently kept up the work of enlightening the people.





St. Mary's River Bridge Connecting Florida and Georgia on Coastal Highway—Road 3—Showing Erection of Steel Swing Span

Their efforts are being rewarded by having the pleasure of seeing the friendly attitude of the Sixty-ninth Congress toward helping States that are willing enough to carry on their good roads program, but are financially unable to bear the whole of the present heavy burden.—Representative F. W. Magrady, Pennsylvania.

Many States are not financially able to construct roads that will accommodate the traffic of today. Yet the public wants to travel through these townships, these counties, and these States that are unable financially to construct these roads, and there is no other alternative but to make the Federal Government the unit for the taxation and the construction of the main market roads. And many of the roads now are used more for the through traffic than they are used by the person residing along the roads. For that reason it is proper and right that the Federal Government and the taxpayers of the Federal Government should bear a part of the expenditure of the construction of roads in the various States.

In Indiana the State Highway Commission, aided by the funds from the Federal Government, has constructed, and is constructing, the main market highways of the State. And, under our State laws, the counties and the townships are constructing roads to connect with these main market highways. \* \* \*

This same principle of finding a larger unit is recognized in many of our State school systems. In the State of Indiana, for instance, we have a law that

any township, or municipality, after levying and collecting a certain rate on the taxable property of that municipality, and it is found to be insufficient to maintain the schools for the length of time required by the State law, that municipality may then draw on the State funds for a sufficient amount to continue the schools.—Representative Frank Gardner, Indiana.

### The National Defense

What does Federal highway aid mean from a military standpoint? I need hardly propound this question to Senators who have fresh in their recollections the lessons of the Great War. At that time the railroads did their share; there was no physical breakdown; and yet we know how all transportation suffered because of lack of capacity to handle the load. It was then that the War Department turned to the highway system, making use of such routes as we had to transport munitions and other war supplies from point of manufacture to the seaboard for shipment across the Atlantic. Military authorities are still testing the roads by the movement of troops and supplies so as to know what they may count upon in the event of an emergency.

There is another use of the roads for national defense which is sometimes overlooked. It was succinctly expressed by General Pershing when he appeared before our Postoffice Committee in 1921 and said:



"The country road will be of tremendous value in time of war. These roads must be relied upon to obtain the needed food supplies."

Permit me to state that adequate highway transportation is just as important from that standpoint as many direct activities of the War and Navy Departments. Do you know that the United States Bureau of Public Roads recognizes this fact, and that ever since the co-operative work was undertaken all Federal-aid roads are so constructed that the culverts and bridges shall meet the needs and requirements of the Army? The War Department was also consulted as to the greatest national need for defense purposes before the present Federal-aid routes were finally approved.—Senator L. C. Phipps, Colorado.

We have approximately 12,000 miles of coast and border line. It is absolutely necessary that there be improved highways following these boundaries. Back of what might be our first line of defense at any time, there should be numerous other trunk highways improved to the extent that they might be used, if necessary, as our second, third, fourth, and fifth lines of defense. I am referring particularly to the sea-coast. These in turn must be connected with each other and with our various manufacturing or agricultural centers so that the whole will form a complete network of highways gridironing the Nation. *We must not lose sight of the necessity of completing as soon as possible our system of transcontinental highways from coast to coast as a military precaution to supplement the railroads in an emergency.*

During a military emergency it is often impracticable to transport materials or men other than over highways, and the difference between victory and defeat may depend largely upon the condition of the highways over which vehicles commandeered for the emergency must travel speedily and heavily loaded. We need no better examples of the value of improved roads during a military emergency than those still fresh in our minds as the result of the late World War.—Senator T. C. Oddie, Nevada.

#### The General Welfare

There is no expenditure of the public moneys which does as much to promote the prosperity, welfare, and comfort of the people as the money spent to extend the good roads system. *This is one expenditure that the people all over the country do not wish to see cut down. They want the good road system to be further and further extended. And they are, in my judgment, quite right about it.*

No small amount of general prosperity has come to this Nation because of the good roads that have been built across and through the States. Think what it means to the family living on unimproved sections of roadway to be able to get out of the mud and to have an improved roadway upon which to transport goods, farm products, lumber, and the like. Good roads mean added value to the lands adjoining them, quick and easy transportation of man and the goods he buys and sells, cleanliness through the riddance of dust, access to market, means of visiting cities and towns or his neighbors, a prompt response to a call for the doctor, quick mail delivery, pleasure for the family, and many other benefits.—Representative Millard E. Tydings, Maryland.

The question of the relationship of road improve-

ments to the general welfare of the Nation is one which can best be answered by inquiring into the value of such improvements in the social, economic, and political life of our country.

When we consider the facilities offered by our great system of national highways for recreation to millions of our citizens, the health-giving and building that motoring gives them, the educational opportunities made possible by the bringing together of rural schools into modern consolidated schools which compare favorably with the more advanced institutions of learning in our great metropolitan districts, and the opportunities offered for closer fellowship within the family circle during the vacation periods and for greater participation in the religious and civic life of the community, it will be very evident that the benefits therefrom extend far beyond the community and State and are permitting a social development by our Nation which has never been equaled in the world's history.—Senator T. C. Oddie, Nevada.

One of the very great problems of the present day, and a problem that will become more pressing as the years come and go, will be how to feed and clothe the Nation. Good roads reaching all the sources of production will bring the fruits, vegetables, poultry, dairy, meat, and other products quickly and cheaply to the consumer. *And even though there should be a breakdown in our rail or water transportation, the Nation could be cared for through and by her highways.*

Good roads are a great educational asset. They are making better farms, better homes, better schools, and better citizens. Because of our roads the North, East, West, and South are enabled to mix and mingle together freely. Nothing could contribute more to a united and happy people. This is a great agency to wipe out sectional and provincial prejudices. In the language of the highway, we all become brethren and neighbors. I do not believe there could have been a Civil War if we had had a great system of highways such as we now have.—Representative J. M. Robsion, Kentucky.

A country without highways in a few years would belong to the Dark Ages. The greatest single forward movement being taken by the race of men today is the means of intercommunication. The greatest single thing for the advancement of learning, intelligence, and of civilization is the opportunity that is afforded for the people of a country and of various countries to mingle with each other.—Senator J. A. Reed, Missouri.

It has been intimated that the Federal appropriations for highways have been so generous that in order to meet the Federal law requirements States are compelled to make appropriations beyond their means. This argument is conclusively answered when your attention is called to the fact that the States have constructed a larger mileage of State roads without Federal funds than with Federal funds.

I also call your attention to the fact that in 1924 (last report) the States collected from auto licenses and gas tax \$358,660,055, when they needed but \$67,081,920 to meet the Federal funds. Again, the

(Turn to page 10)



# The Engineer "If"

With Apologies to Kipling

By ROBERT ISHAM RANDOLPH, M. W. S. E.

**I**F YOU can swing an axe, or wield a brush-  
hook,  
Or drive a stake, or drag a chain all day;  
If you can scribble "figgers" in a note book  
Or shoot a range pole half a mile away;  
If you can sight a transit or a level,  
Or move a target up and down a rod;  
If you fear neither man nor devil,  
And know yourself and trust the living God.

If you can wade a swamp or swim a river,  
Nor fear the deep, nor yet the dizzy heights;  
If you can stand the cold without a shiver,  
And take the Higgins ink to bed o' nights;  
If you can turn a thumb screw with your fingers,  
When every digit's like a frozen thumb;  
If you can work as long as daylight lingers,  
And not complain, or think you're going some.

If you can sight through tropic heat's refraction,  
Or toil all day beneath a blistering sun;  
If you can find a sort of satisfaction  
In knowing that you've got a job well done;  
If you can be an Eskimo and nigger  
And try to be a gentleman to boot;  
If you can use a "guessin' stick" to figger  
And know a coefficient from a root.

If your calculus and descriptive are forgotten,  
And your algebra just serves you fairly well;  
If your drafting and your lettering are rotten,  
And your Trautwine's always handy by to tell;  
If you can close a traverse without fudgin',  
Or check a line of levels by a foot;  
If you can set a slope stake, just by judgin',  
And never kicked a tripod with your foot.

If you can run a line where you are told,  
And make it stay somewhere upon the map;  
If you can read your notes when they get cold,  
And you know that contours mustn't ever lap;  
If you can line a truss or tap a rivet,  
Or make a surly foreman come across.  
If you can take an order, as well as give it,  
And not have secret pity for the boss.

If you can climb a stool and not feel lowly,  
Nor have your head turned by a swivel chair;  
If you can reach your judgments slowly,  
And make your rulings always just and fair;  
If you can give yourself and all that's in you  
And make the others give their own best, too;  
If you can handle men of brawn and sinew,  
And like the men and make 'em like you too.

If you can't boast a college education,  
Or, if you've got a sheep-skin, can forget;  
If you get a living wage for compensation,  
And give a little more than what you get;  
If you can meet with triumph and disaster  
And treat them without favor nor with fear;—  
You'll be a man and your own master,  
But, what is more, you'll be an **Engineer**.



## WHAT THE CONGRESS THINKS

(Continued from page 8)

States expended in excess of the amounts for Federal-aid roads \$413,273,000.—Representative E. B. Almon, Alabama.

## Aid to Education

The free use of the highways in the past few years has furnished wonderful educational and recreational opportunities to the people of our Nation, and the demand for the use of the highways is increasing day by day for this purpose. A statement was made before the Committee on Roads just recently that during the past summer 12,000,000 people used the highways for education and recreation, and expended over \$2,000,000,000 in such purpose.

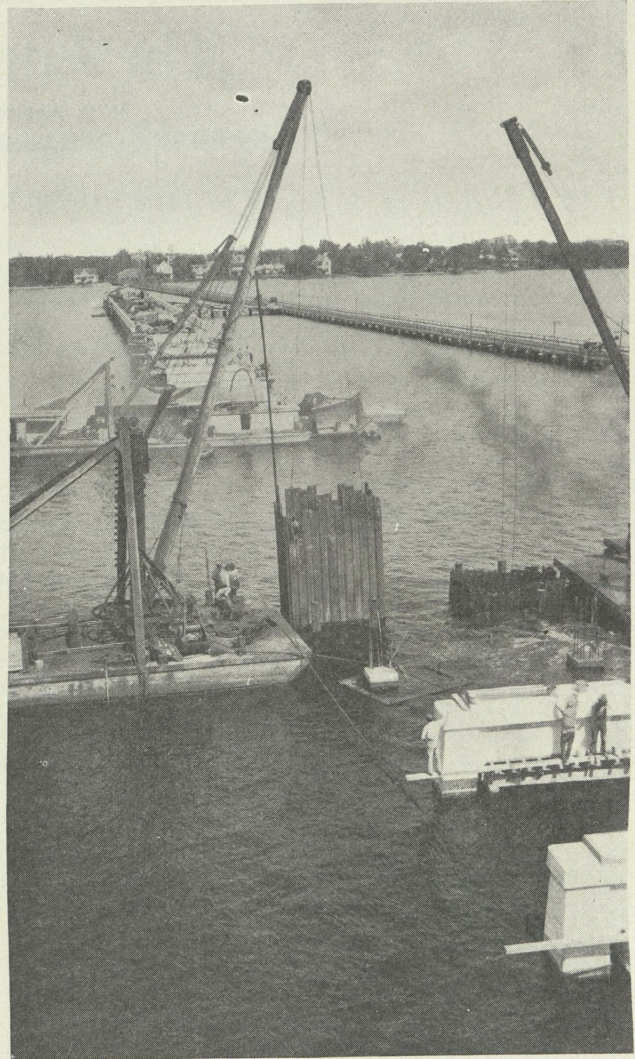
The importance of a complete system of Federal highways throughout the Nation can not be estimated in its benefits to the people of the country, in convenience, in recreation, in education, and in financial value.—Representative C. C. Dowell, Iowa.

*There are at least four great aids to the building of happy homes in this or any other country—four great pillars: The schools, the churches, the press, and the State. The highway systems are the arteries of the country by which these great aids are taken to the homes.* The consolidation of our public-school system has been made possible because of better transportation. Horace Mann builded better than he expected when he led the fight for the public schools of America. Those schools are developing faster than even he dreamed they would develop. They are developing rapidly in every part of the land—the country boy and the city boy are put on an equality. This can be done only where there are consolidated schools, and consolidated schools are only possible in the rural districts where there are good roads.

The churches of our land are doing their part in the development of this great civilization of ours. Gentlemen, you need only to get people of various religious beliefs together and you get tolerance as a result of that coming together. We need to know each other better. When we do know each other, then the spirit of tolerance in religious belief is found, and where there is no social mingling together you will usually find religious intolerance. Good roads usually mean social development. And so by means of transportation this great pillar of civilization—the church—is enabled to better perform its function in the great scheme of things.

The press: We need an enlightened public opinion. Nothing brings that about like the daily papers, the magazines, that are brought to the very door of the inhabitants of this country. Good roads are always conducive to better understanding and react to the social and economic advantage of all the people.—Representative D. B. Colton, Utah.

And in addition to contributing to the national wealth, I know of no appropriation that has done so much to improve conditions and bring about enlightenment as has this system of extending Federal aid to the States for road improvement. \* \* \* The State recognizes the fact that it cannot permit the children of any part of the State to be deprived of the necessary training in school because of the lack of funds in that particular municipality, thus recognizing the fact that a township, or a county, is too



Project 593—Manatee River Bridge Looking Toward Palmetto. Driving Steel Sheet Piling and Excavating Cofferdams in the foreground.

small a unit for the school system, and the same is equally true with the road system.—Representative Frank Gardner, Indiana.

The influence which the use of the motor vehicle has exerted upon education cannot always be stated in statistical terms. Studies made by the Bureau of Education of the United States show that in 1924 there were 19,656 motor buses in use by rural schools and 470,000 children were transported daily to them by motor vehicles.

The actual reports of 2,310 out of 3,309 county superintendents in the United States show that in this year there were 1,424 new school consolidations. Improved roads make possible a daily attendance at school, while the use of the bus has been a large factor in the elimination of the little red schoolhouse, which, while a picturesque element in our education system, is far from the standard set by the new consolidated schools, with their elaborate equipment for physical and mental training of the child and better grade of teachers.—Representative B. E. Kemp, Louisiana.

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## Contracts Awarded by State Road Department January 1, 1926—October 13, 1926

Contractor	Project No.	County	Length Miles	Length Feet	Contract Plus 10%	Type
Noonan-Lawrence	51	Escambia	6.25	....	\$ 206,575.89	Concrete
J. S. Walton & Co.	648-B	Hardee	....	615	83,228.09	Conc. Timber
Chas. F. Wilmore	641-A	Palm Beach	11.36	....	86,081.38	Grade
Gillis Const. Co.	644-A	Wakulla	8.49	....	47,367.49	Grade
L. M. Gray	617-618	Alachua	16.06	....	248,123.10	R. Base
Montgomery & Parker	633-B	Gadsden	....	240	39,591.47	Conc. Bridge
Peterson & Earnhart	672-B	Leon	....	1950	197,377.45	Conc. Bridge
Concrete Steel Bridge Co.	641-B	Palm Beach	....	237	120,766.80	Conc. Bridge
Concrete Steel Bridge Co.	656	Palm Beach	....	727	222,200.60	Conc. Bridge
American Bascule Bridge Corp.	641-656	Palm Beach	....	120	63,573.40	Bascules
J. W. Hall	689	Alachua	1.67	....	10,599.42	Grade
H. E. Wolfe	562-A	Highlands	5.37	....	142,837.33	S. T.
C. A. Steed & Son	694-694-A	Martin-St. Lucie	8.48	....	61,599.45	C. G. & G.
Boone & Wester	693	St. Lucie	8.73	....	59,670.88	C. G. & G.
Duval Engineering & Contr. Co.	31	Hamilton	11.82	....	241,489.11	R. Base
F. S. Whitney	642	Putnam	10.18	....	210,025.00	R. Base
Wm. P. McDonald	675	Polk	5.16	....	256,969.88	S. A.
Noonan-Lawrence	500-A	Bay	9.65	....	334,611.65	Concrete
R. H. H. Blackwell	693	St. Lucie	....	160	80,466.96	Concrete
C. A. Steed & Son	694-694-A	Martin-St. Lucie	....	327	125,796.52	Concrete
W. P. McDonald	648	Hardee	1.00	....	31,363.20	R. B. S. T.
Gilbert & Hadsock	676-A	Levy	9.95	....	48,875.58	C. G. & G.
McLeod Const. Co.	676-B	Levy	14.39	....	135,259.30	C. G. & G.
Peterson & Earnhart	673	Gadsden	....	20	10,727.90	Concrete
Atlantic Bridge Co.	38	Escambia	....	....	28,260.98	Surface
Lake Worth Const. Co.	543	Seminole	14.20	....	109,759.62	C. G. & G.
A. Bentley & Son Co.	621-C	Okaloosa	....	1363	147,295.80	Concrete
A. Bentley & Son Co.	621-B	Okaloosa	....	1568	157,361.60	Concrete
E. F. Powers Construction Co.	668	Brevard	13.45	....	119,128.58	C. G. & G.
E. F. Powers Construction Co.	564-C	Charlotte	3.93	....	42,264.98	C. G. & G.
L. M. Gray	595	Volusia	6.43	....	122,022.17	R. Base
B. Booth & Co.	53-A	Lake	7.09	....	60,252.65	C. G. & G.
H. E. Wolfe	589	Charlotte	8.16	....	174,725.21	R. Base
W. J. Bryson Paving Co.	614	Sarasota	17.08	....	129,895.29	C. G. & G.
Atlantic Bridge Co.	634-B	Jackson	....	456	70,707.86	Concrete
Duval Engineering & Contr. Co.	504	Columbia	9.41	....	178,551.36	R. Base
R. C. Huffman Const. Co.	669-C	Dade	12.00	....	311,027.69	Grading
L. B. McLeod Const. Co.	682	Citrus	6.45	....	106,241.56	R. B.
Wilson Pipe Co.	564-C	Charlotte	....	134	43,123.52	Conc. & Steel
M. C. Winterburn, Inc.	659	Clay	13.27	....	133,334.45	C. G. & G.
H. E. Wolfe	655	Highlands	5.00	....	105,874.01	R. Base
Broadbent Const. Co.	564-B	Charlotte	9.73	....	190,330.76	R. Base
Thompson & Moseley	589	Charlotte	6.66	....	10,916.86	Conc.
Wm. P. McDonald Const. Co.	663	Citrus	8.03	....	138,345.79	R. Base
Peterson & Earnhart	48-B	St. Johns	....	456	81,700.91	Conc. Bridge
F. M. Stuart & Co.	49-B	Flagler	....	200	62,967.30	Conc. Bridge
Baker & Foulks	533	Suwannee	13.47	....	249,410.72	R. Base
Alexander, Ramsey & Kerr	669-V	Collier	11.91	....	382,631.70	C. G. & G.
Alexander, Ramsey & Kerr	669-X	Collier	9.39	....	104,164.50	C. G. & G.
Johnson, Drake & Piper	565	Madison	15.99	....	464,271.36	Concrete
E. W. Ellis	687-A	Lake	15.00	....	120,043.11	C. G. & G.
Peterson & Earnhart	673-B	Gadsden	....	418	61,525.44	Conc. Bridge
A. J. Hoffman	677-A	Levy	6.96	....	38,450.94	C. G. & G.
Langston Const. Co.	676-C	Levy	13.93	....	93,096.41	C. G. & G.
Preskett, Patterson & Blackburn	14	Santa Rosa	6.00	....	96,568.34	Conc. Shldrs.
E. Roy James	50-C	Putnah	10.03	....	89,350.31	C. G. & G.
Duval Engr. & Contr. Co.	7	Hamilton	12.90	....	246,862.55	R. Base
Wm. P. McDonald	679	Hernando	7.11	....	129,358.28	R. Base
Boone & Wester	50-A	Putnam	6.18	....	71,433.42	C. G. & G.
Langston Const. Co.	660	Clay	10.52	....	180,619.71	R. Base
J. L. Gladwell	619	Alachua	9.28	....	42,957.36	C. G. & G.
M. C. Winterburn, Inc.	529	Suwannee	12.70	....	365,381.55	Concrete
M. C. Winterburn, Inc.	534	Brevard	10.00	....	132,405.26	Repair
J. M. Parker	589	Lee	8.27	....	15,400.00	Shoulders
Total			442.46	8991	\$8,421,062.81	



## WHAT THE CONGRESS THINKS

(Continued from page 10)

### Highways in Terms of Transportation

The improvement of the motor car has made highway improvement a necessity, and the vast expanse of the automobile trade and traffic has necessitated a nation-wide system of highways, and this can only be carried on in a system in which the Federal Government has a part.

The development of the automobile and of the automobile traffic, hence the necessity for greater and more extensive highway improvements, has progressed in the past few years beyond the most exaggerated dream of the enthusiast.

It is apparent to everyone who has given the subject serious consideration that with 20,000,000 motor vehicles in service and in operation throughout the country it is clear that a nation-wide system of highway construction is a necessity in the United States. And this necessity will grow day by day and year by year as these motor vehicles increase in number, in importance, and in value.

The telephone service has been in operation for a half century and has become a necessity in almost every household, yet we are told that there are today more motor vehicles in the United States than there are telephones.

In the testimony before the Committee on Roads some time ago the evidence disclosed that interesting experiments have been made to ascertain approximately the operating cost of motor vehicles over various kinds and types of roads, including dirt, gravel, and hard-surfaced roads.

This investigation discloses that on an ordinary dirt road we get approximately 14 ton-miles of traffic per gallon of gasoline. On gravel roads we get approximately 21 ton-miles per gallon of gasoline, and on hard-surfaced roads we get approximately 31 ton-miles per gallon of gasoline.

With gasoline costing 20 cents per gallon, the gasoline cost of operating a motor vehicle on a dirt road is approximately 1.43 cents per ton-mile. On gravel roads the cost is approximately 0.95 of a cent per ton-mile and on hard-surfaced roads approximately 0.64 of a cent per ton-mile.

The saving of gasoline in the operation of a car, however, is only one of the many items which go to make up the cost. Excluding the fixed items, such as taxes, license fees, and garage, which are not affected by road conditions, the experts claim that all other charges for operation and maintenance of a motor vehicle are affected in a like ratio, and in summing up the aggregate cost of owning and operating a motor vehicle the experts claim that the cost of operating a car over a gravel road is much less than over a dirt road. And the cost of operating a car over a hard-surfaced road is one-fourth less than operating it over a dirt road.

From estimates made by the National Automobile Chamber of Commerce, the Bureau of Public Roads and the American Association of State Highway Officials, the estimated value of motor vehicles in the United States in 1925 was approximately \$16,500,000,000. These estimates further indicate the American people are operating these automobiles on the streets and highways at the enormous cost of more than \$11,000,000,000 annually. This estimate does not include garage, driver's wages, and oils. And I saw

a statement the other day issued by the Associated Press which included these items, and this estimate aggregated \$14,000,000,000, a sum in excess of one-half of the entire national debt. This huge annual outlay cannot be imagined or understood until it is reduced to the individual automobile, but when we take into consideration that there are 20,000,000 motor vehicles in operation, we see it only requires an average outlay of approximately \$600 to \$700 per annum on each car to aggregate this vast sum.

With this vast investment and this enormous annual cost of operation, it is plain to everyone that a great system of highways is imperative. While the Federal-aid program is far from completed, great strides have been made in the past few years in the improvement of this system.—Representative C. C. Dowell, Iowa.

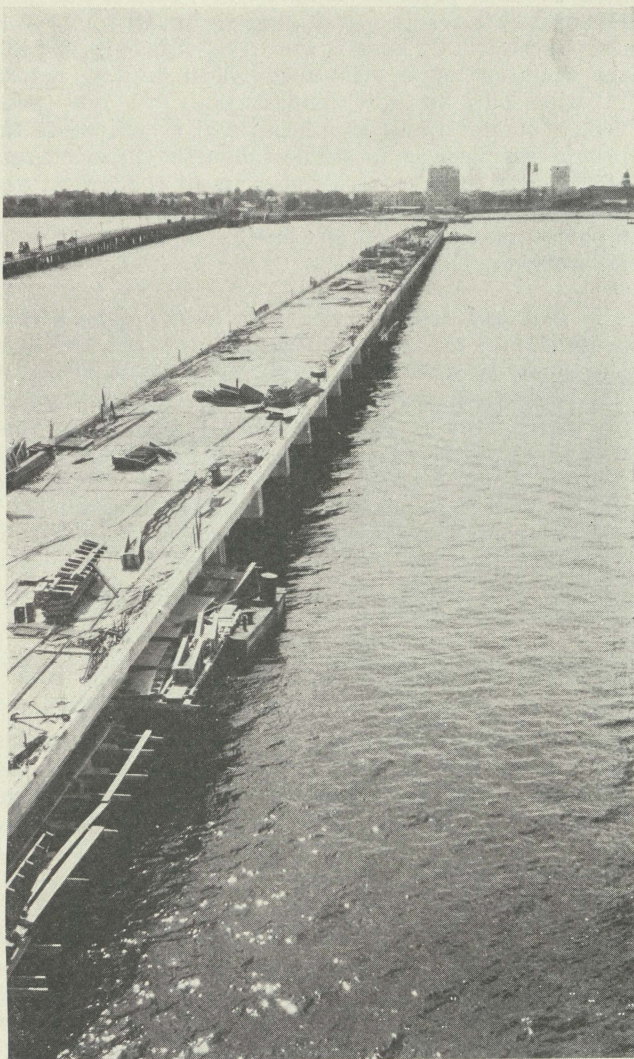
The gross tonnage to be hauled over the highways of the United States on an average year is over 700,000,000 tons. This computation was made by a joint committee of Congress on Federal aid in 1914. It is much more than this now. The average haul computed at 9 miles makes a gross saving on the transportation over improved roads of 72 cents per ton. This, multiplied by the gross tonnage, gives \$504,000,000 the saving per year through improved roads, estimated away back in 1914. In other words, the United States has been paying a penalty of more than \$504,000,000 per year in the excessive cost of the transportation of our agricultural products alone because of its neglect of its highways.—Representative E. E. Browne, Wisconsin.

The traffic in the United States is now at least 20 per cent interstate traffic; that is, people do not travel just in their own State. They go out of their State, and just as soon as you go out of your State the State you are in is really under no obligation to furnish you a road. You are getting it for nothing and you pay no taxes there. It seems to me as soon as you get out of your own State you are in interstate traffic, you are in United States traffic, and it seems to me it is reasonable to say that the United States should contribute to the care and building of that road which such people are using at the sufferance of the State they are in.

Twenty per cent of the traffic is interstate, and a billion dollars is being spent by the States every year, and if the United States would spend her share represented by the interstate traffic, we would have a bill here of \$200,000,000, which is one-fifth of what is being spent, instead of \$75,000,000 which the committee reports.—Representative Charles Brand, Ohio.

The advent of the automobile, and with it the tourist, awakened the public to the great need of better highways for both business and pleasure. State after State took up the question of building much-needed highways according to a set plan. Pennsylvania was among the first to prepare a great highway system, but found that it required a vast sum of money to make just a start in the work. Plans were proposed to raise some of the money to establish what is one of the most efficient highway departments of any State, and to prepare maps showing the proposed routes and plans for general construction of what then was considered a foundation strong enough for any known vehicle. Just as the railroads learned that the wooden rail with an iron strap fastened on top of it would not bear the heavy locomotives,





Manatee River Bridge, Looking Toward Bradenton, 24-foot Roadway and Two Sidewalks

freight, and passenger cars that roll over the tracks now, so the highway department has learned that what was once an amply strong and durable road for such traffic as then passed over it is no longer able to bear the strain of the ponderous machines laden with every conceivable kind of freight that now is carried upon the highway, sometimes to the advantage of the shipper and very much so to the owner of the transport, because the State furnishes and keeps in good repair the track he is privileged to use. He has no overhead or capital investment in tracks that must be constantly renewed and kept in good repair. This situation borders on real socialism, to the great disadvantage of the stockholder whose savings are invested in railroad or trolley roads.—Representative F. W. Magrady, Pennsylvania.

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United States has been paying a penalty of more than \$504,000,000 per year in the excessive cost of the transportation of our agricultural products alone because of its neglect of its highways.—Representative E. E. Browne, Wisconsin.

Repeated studies made by the Department of Agriculture have shown beyond the question of a doubt that the use of the car not only enables the farmer and his family to travel where they want, when they want to, but has a decided influence on their economic life as well.

Where roads are improved, new markets are made available, rotation of crops becomes possible, areas held for purely farm use are brought within the influence of the cities and their values heightened, and the cost of labor is reduced through the large savings of time.—Representative B. E. Kemp, Louisiana.

#### Federal Co-operation Must Continue

When Congress laid out a system of national highways and agreed to aid the States in improving them, the States accepted the offer with the greatest sincerity and faith. They expected then, and will continue to expect, Federal co-operation until all of the roads on the system are improved to meet existing traffic needs. *To withdraw this aid now would be a most unhappy solution of the nation's highway problem and a sad testimonial to the ability of the Federal Government to keep faith on what is unquestionably one of the most important co-operative undertakings ever entered upon between the two principal political divisions of our Nation.* \* \* \*

The large percentage of the citizens of every State are motorists, tourists, or business men using the highways of other States. It might be contended that there should, therefore, be reciprocity between the States so that motorists from one State might enter and leave another State at will. It is possible for one State to collect taxes from motorists and other users of the highway, put them into its own treasury, and if its revenues are large build splendid highways. I might then insist that other States improve their highways and permit its citizens to travel on them. But is it not a much fairer and more equitable way to solve the problem by having the Federal Government collect in taxes from all citizens of the United States sufficient revenue to make possible its aid to the States in improving the interstate routes, now so heavily burdened with tourist traffic and vehicles operated for commercial purposes? To withdraw or curtail such aid at this time would be uneconomic, a breach of faith, and wrong. \* \* \*

With the impetus Federal aid has given to road building throughout the States there are a few that have gotten to the point where they could well afford to forego the privilege of receiving further funds. While these States could forego this privilege, the Federal Government could not, for if it expects at any time in the reasonably near future to have a complete system of national highways, it must offer to all the States sufficient inducement in the form of financial aid to get them to improve interstate highways in preference to unimportant local highways. \* \* \*

The national needs are such that road improvements must be made if we are to continue to progress, and these needed improvements can be obtained only by Federal co-operation, which can be given in a lawful manner. \* \* \*



To discontinue Federal aid now or at any time in the future before the highways on the designated systems have been improved would be an unwarranted breach of faith with the States. Ten years ago the Federal Government declared its policy. Five years ago it reaffirmed this policy when it set up the Federal aid highway system. Today this system is about two-thirds improved, but instead of the Federal Government having assumed one-half of the total cost, it has borne slightly more than one-fifth. The improvement of national highways has cost the States more than \$2,000,000,000 and the Federal Government only \$550,000,000. \* \* \*

For convincing evidence of the great public interest in the subject, and also the complete unanimity of expression on it, I call attention to the fact that nine of the very largest and strongest national organizations in the country representing the viewpoint of the farmer, the tradesman, the motorist, the banker, the automobile manufacturer, the manufacturer and business man generally, labor, and the State highway official, appreciating keenly the value of this Federal activity to the country at large and their own groups in particular, have joined unanimously in requesting Congress to continue Federal aid on roads.—Senator T. L. Oddie, Nevada.

It is obvious, of course, that unless this program be followed up and Federal aid for the improvement of these roads continued the entire program built up in the last decade by this very satisfactory co-operation of the Federal Government with the highway departments of the States will be greatly retarded, and road construction will be given a terrific blow. While road construction was going on in the several States, it was not until the Federal Government entered into co-operation with the States that a complete and adequate system of road building was adopted, and when the 7 per cent system or program is completed almost every section and part of the United States will be accessible to motor vehicles on an improved highway. This year the Federal Government, the States, and their subdivisions will expend more than \$1,030,000,000 for the construction and maintenance of the highways of the Nation. The road building program of this country is the largest public works job the world has ever known. I hardly need add that I am in hearty accord with the Federal-aid roads program.—Representative Florence P. Kahn, California.

When Congress passed the Act of November 9, 1921, it said to each of the States that you must establish a highway system; you must change your constitution and laws, if necessary, to make the State the unit and not the county in dealing with the Federal Government on this question; you must pass such laws as will provide for the maintenance of this system of roads, when constructed. You must submit a map setting forth 7 per cent of your highways used for star route and rural mail routes, and the Federal Government will get all these maps together and help work out a great co-ordinated and unified system of highways. The States complied with these conditions; the system was laid out and is now being constructed; the Federal Government agreed to help build the system, and I think the Federal Government is honor bound to continue this contribution until this great system is improved, and in doing so the Federal Government will provide for the com-

mon defense, promote the general welfare, and give its mail carriers proper highways on which to conduct the Nation's mail business. It will help to unite the country as it has never been united before. It will help to add immeasurably to our prosperity, comfort, and happiness, and it will cause the people everywhere to rejoice that they are citizens of the most wonderful country in all the world, and that our country has the greatest, finest, and best highway system in all the earth.—Representative J. M. Robsion, Kentucky.

*If you will continue this plan as it has been commenced until this great system is completed and until you have brought the means of transportation to American home builders, you will aid in preserving the institutions of America and our great traditions will be perpetuated and made safe.* I believe in the continuity of American institutions and American ideals; and if we are anxious to continue them, I say the United States Government can do much toward bringing about that happy condition by continuing this great road-building program.—Representative D. C. Colten, Utah.

#### THE HIGHWAYS BECKON, "COME AND SEE"

There exists in the average citizen an irrepressible urge to go and see for himself how people live elsewhere. During the past summer hundreds of thousands of automobiles have traveled far from home and delved into neighboring and more distant states. The visible assets of these states have been disclosed to all eyes.

Where a good impression was made on the travelers by the natural beauty of the countryside, the character of the roads, the hospitality of the people, the climate or other advantages, the benefit to the state has been great. The returning traveler sings the praises of the favored land to many people.

The magnificent gridiron of highways in the United States over which now 17,000,000 motor vehicles travel almost unceasingly is destined to grow to ten times its present size. Then indeed will the states be unmasked and the good and the bad in each section will be common knowledge to people living in other sections, for they will have "gone and seen."

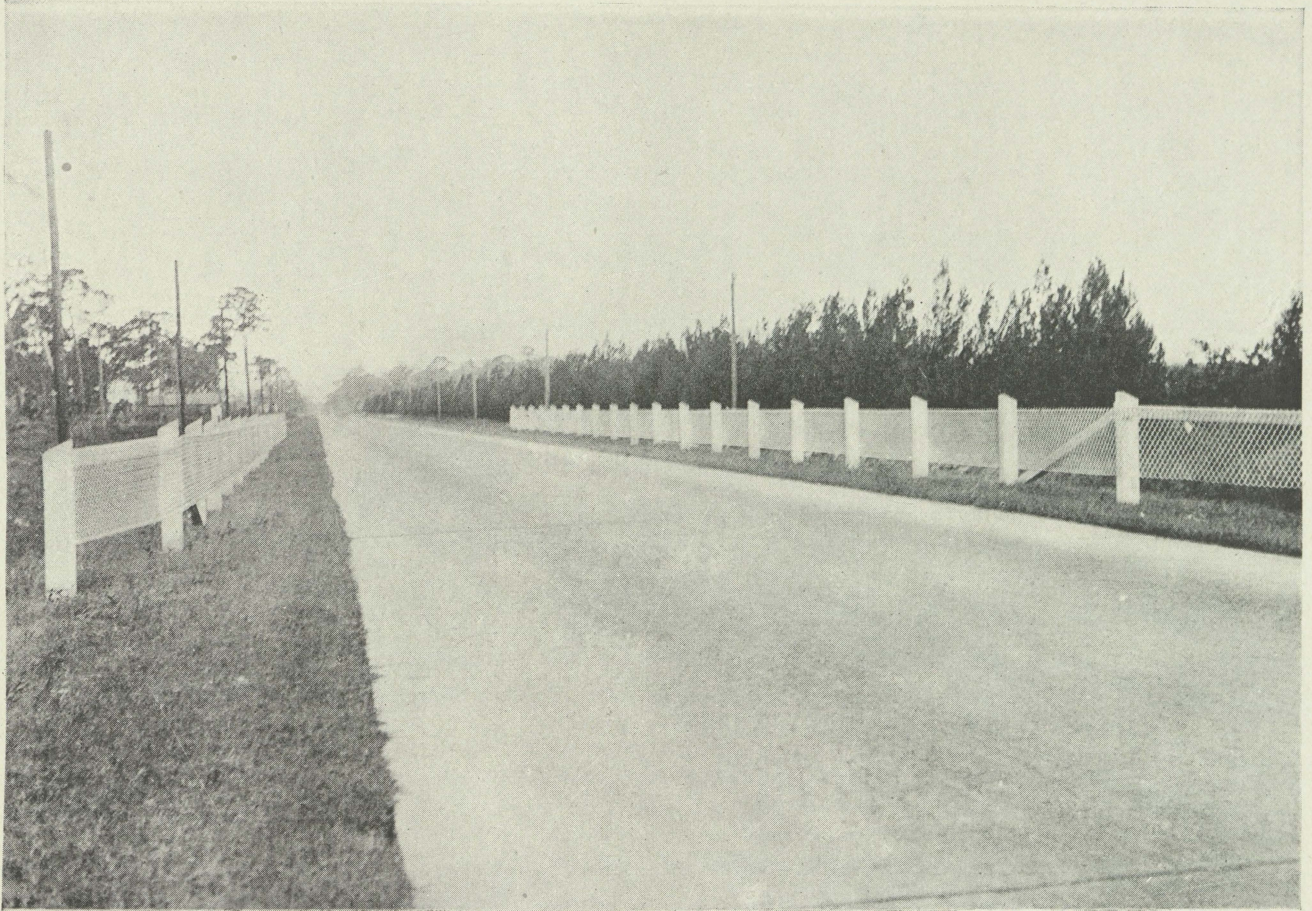
The appearance of the roadsides has not received the attention that has been devoted to obtaining a smooth pavement. Yet the impression gained of a road is not entirely that obtained from the character of the surface. The motorist's impression is of a composite nature.

The saying that the dollar follows the highway is as true today as it was in the early days of pioneer settlement. Florida, California, Wisconsin and New England have proved that fact as regards tourist travel. Consider the number of cars that annually visit the scenic national parks.

Men will "go and see for themselves" and it behooves the residents of any section to see to it that what they see is pleasing and worth while.—Highway Engineer & Contractor.

Following the news of last week to the effect that the atom is divisible comes a dispatch from Chicago to the effect that skirts are to be shorter and tighter this autumn.—New York World.





Project 36-B—State Road No. 4

### AUTO THEFTS KEEP UP WITH REGISTRATION

While the automobile business broke all records for manufacture and sale in 1925, automobile thieves kept apace with their mass abduction methods, also, according to the National Automobile Dealers' Association, which has just made public theft statistics in 28 key cities on which it has kept records for the past eight years. In 1925 in these 28 cities there were 77,174 motor vehicles stolen as against 57,331 in 1924, and 27,445 in 1918.

While more cars are still stolen each year in these cities than recovered, there has been a steady improvement in efficiency of the police departments in those cities, as the number of recoveries has steadily risen since 1921.

In 1925 there was recovered 86 percent of the number of cars stolen in these cities as against 83 percent in 1924 and 79 percent in 1918.

Most of the larger cities of the country now have automobile theft squads, composed of men who specialize in the detection and pursuit of automobile thieves. They have developed a very comprehensive system of identification of the professional automobile thieves, who generally work along certain recognized lines, and have thus been able to effect recoveries of cars months after they have disappeared and often hundreds of miles from the point from which they were stolen.

The certificate of title laws have been of great help to the police departments because such laws enabled the interchange of information in regard to motor and serial numbers when car is offered for licensing

after it has been stolen. Stolen car records are widely exchanged by State registration officials, and when such car appears for record or when a car appears with defaced identification marks, police are promptly notified.—Miami Motorist.

### George's Handicap

"Children," said a teacher, "be diligent and steadfast, and you will succeed. Take the case of George Washington. Do you remember my telling you of the great difficulty George Washington had to contend with?"

"Yes, ma'am," said a little boy. "He couldn't tell a lie."—East Grinstead Observer.

### Sizing Up the Sheik

A popular actor was appearing as Sidney Carton in "A Tale of Two Cities."

"It is a far, far better thing that I do," he declared, "than I have ever done before."

"I think he was better in 'Busted Hearts'," whispered a girl in the audience.—Louisville Courier-Journal.

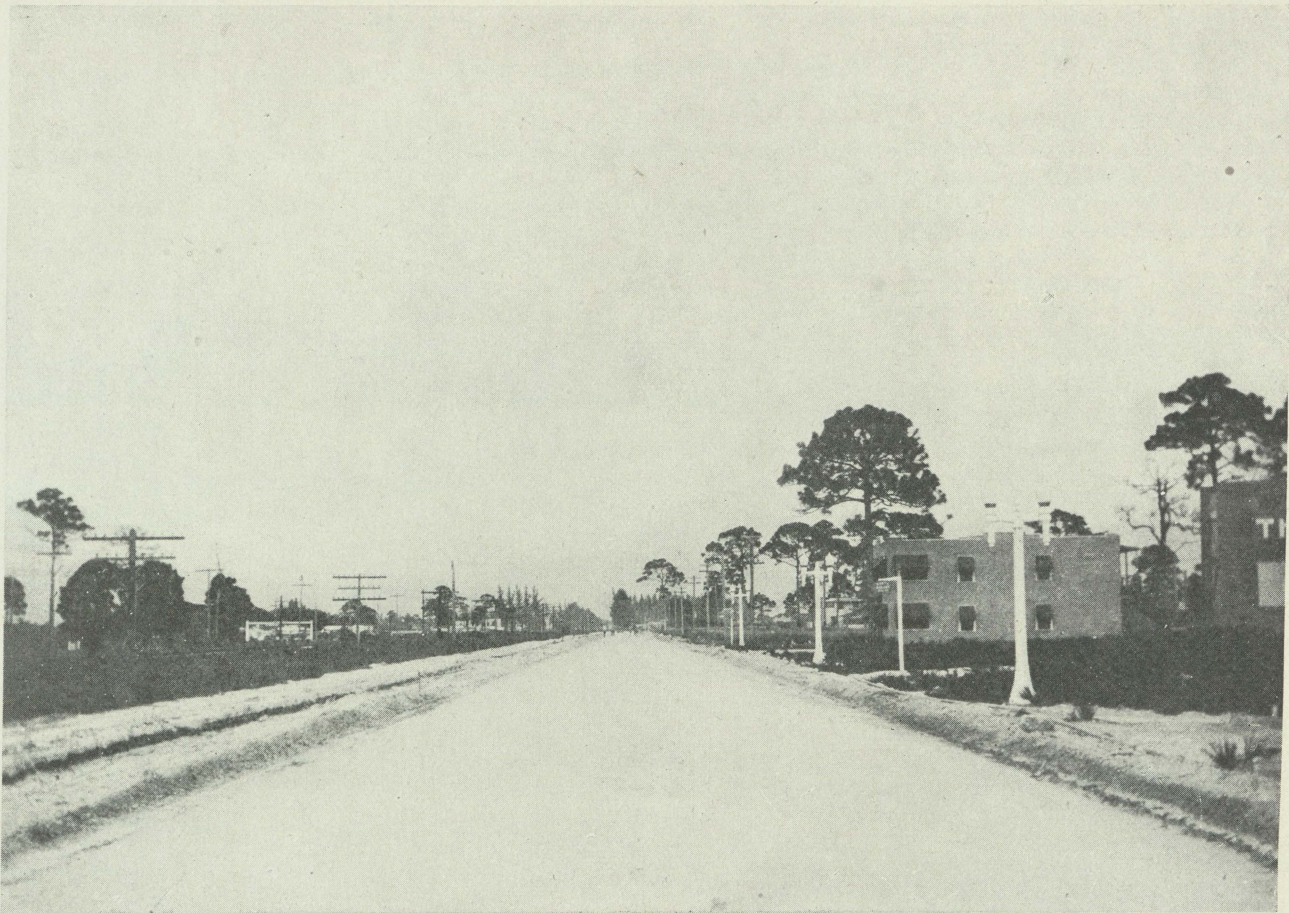
### Five Cents' Worth

Customer (on Sunday morning)—"Give me change for a dime, please."

Druggist—"Sure, and I hope you enjoy the sermon."—The Western Christian Advocate.

The only ones who must compete with dead people are authors and a widower's second wife.—Wilming-ton Dispatch.





Finished Base Course—Federal Aid Project No. 41—Road 4—Dade County

## Good Roads in Florida

THE State of Florida with its 5,000 miles of good highways, has just begun its road building. The State Highway Department in its splendid program is furnishing inspiration to all the counties. Florida road building will continue without interruption until it leads the nation in modern highways.

Florida towns and cities are giving more attention than ever before to good roads and this interest will constantly increase. The lime-rock and shell used in this State as base, are home productions and this is most fortunate with such an extensive program now in operation and more extensive programs to mark the future.

Good roads are indications of a progressive spirit that is making Florida what it should be, and how extremely fortunate is the State that Nature provides within its limits the base which is of such superior quality.

The Floridian will take an active interest in road building everywhere in Florida, and wants the road contractors, and all in authority to co-operate with it.

The columns of The Floridian will be open to all

who have any constructive ideas as to road building. The public generally realize that nothing is more conducive to Florida's advancement than good roads. Through modern highways property values ascend, population increases and farms blossom forth in splendid progress. Good roads are an absolute necessity to every class of people, and Florida is getting fully awake to their importance.

The Floridian reaches every section of Florida. And no section can have too many good roads. While the State is doing its full duty every town, city and county should give added attention to modern streets and highways.—The Floridian.

Bouquets come fast and thick for Dr. Fons A. Hathaway, chief of the Florida Highway Department, who has done and is doing such splendid service for Florida. There was a time in this department when acts were criticized and sensational charges made, but not under Hathaway's direction. Since he took hold real road building has proceeded without friction and without playing politics. The idea of the present commission is to give the best roads possible to the people, and this is being done. There is nothing of greater importance to Florida than highway construction.—The Floridian.



## PROVERBS AND PARABLES

### FROM THE BOOK OF MOTORS

By IRA L. WOOD

¶It is said that "A fool and his car are soon parted by whisky, and a monkey wrench in the hands of a service is a weapon of destruction."

¶Verily there are three things that are past understanding: The way of a maid with hand signals; the way of a speed maniac at a railroad crossing; and the mind of a man that keepeth a cut-out open.

¶And it so happened that there lived a man that took unto himself a new car whose body shone like the unpowdered nose of a maiden and whose engine sang a mechanical song of harmony.

¶And in the morning when he arose he said unto himself: "Verily, I will drive my new car over the highways and byways, yea, even unto the City of Boulevards and there will I enjoy my car upon the streets that the city taxpayers have built. For why should I pay my hard-earned money to the road builders when in a few hours time I may drive to the city and there sport my car at the expense of its taxpayers."

¶But this man knew not the way of a sharp rock with a tire nor the way of a steep grade with a new engine nor the way of a chuck hole with a spring.

¶Now listen ye to the ills that befell this man's car. Before he had reached the portals of the city, yea, even before he was within sight of the city the tires of his car were like unto a sieve, its springs were broken and its engine made a noise like unto that heard in a boiler factory.

¶And when this man had noted the condition of his car, had looked at the holes in its casings and had heard the discordant sound made by its motor, he was exceedingly wroth and he said unto himself: "Verily, in my ignorance have I called my foolish thoughts wise, for where did I profit saving pennies on my road taxes and losing dollars by wrecking a new car on bad roads."—Arizona Highways.



## No Compromise With Safety

Perhaps less than ten percent of those who use the highways for pleasure and business purposes are careless. The great majority of motor vehicle drivers are careful and considerate; they make special efforts to avoid trouble and accidents, realizing that after an accident has happened it is everlastingly too late to express regret, no matter how deep and sincere may be their protestations.

However, in order to curb the reckless activities of the small minority, it is necessary to enact stringent laws. After the rigid laws have been duly and legally promulgated, they are useless unless vigorously enforced. Even if the laws are impartially enforced, and only the payment of a nominal fine demanded, the guilty driver is given his liberty and is allowed to go back to the highways and violate the laws again. Monetary fines do not accomplish the desired end.

Too many drivers—careless and otherwise—use the highways improperly. Too many seem to imagine that by virtue of the fact that they own or operate an automobile, they are privileged characters and may violate all laws with impunity, regardless of the rights and lives of others who may use the roads.

Mere fines will not curb the death drivers. Prison sentences will at least keep the reckless ones involved off the highways for a time. Undoubtedly they will do more than that, for penal servitude is a fate most people wish to guard against. If it is known that the courts will punish, by imprisonment for a term of years, the reckless driver, few motorists will care to

take the risk. Then the highways will become safer and more attractive to the pleasure-seeker and the business man.—The Louisiana Highway Magazine.

### Making the Best of It

The funeral was held last Friday afternoon and entertainment was in the family lot in Fairview Cemetery.—Massachusetts paper.

### Too Honest to Be Interesting

Judge Daly—"How is it you haven't a lawyer to defend you?"

Prisoner—"As soon as they found out that I hadn't stolen the money, they wouldn't have anything to do with my case."—Masonic Home Journal (Louisville.)

### Needless Trepidation

Some things I am afraid of,  
I live in constant fear  
That thoughtless speech of mine shall reach  
A child's attentive ear.

—Edgar A. Guest, New York Telegram.

I think your fear's unfounded—  
You think you'd shock 'em? Say,  
If most kids' speech could ever reach  
Your ears, you'd faint away!

—Ted Robinson, Cleveland Plain Dealer.

### Whence This Emotion

Wife—"John, why are you so delighted at his sliding second base—do you know him personally?"—Judge.

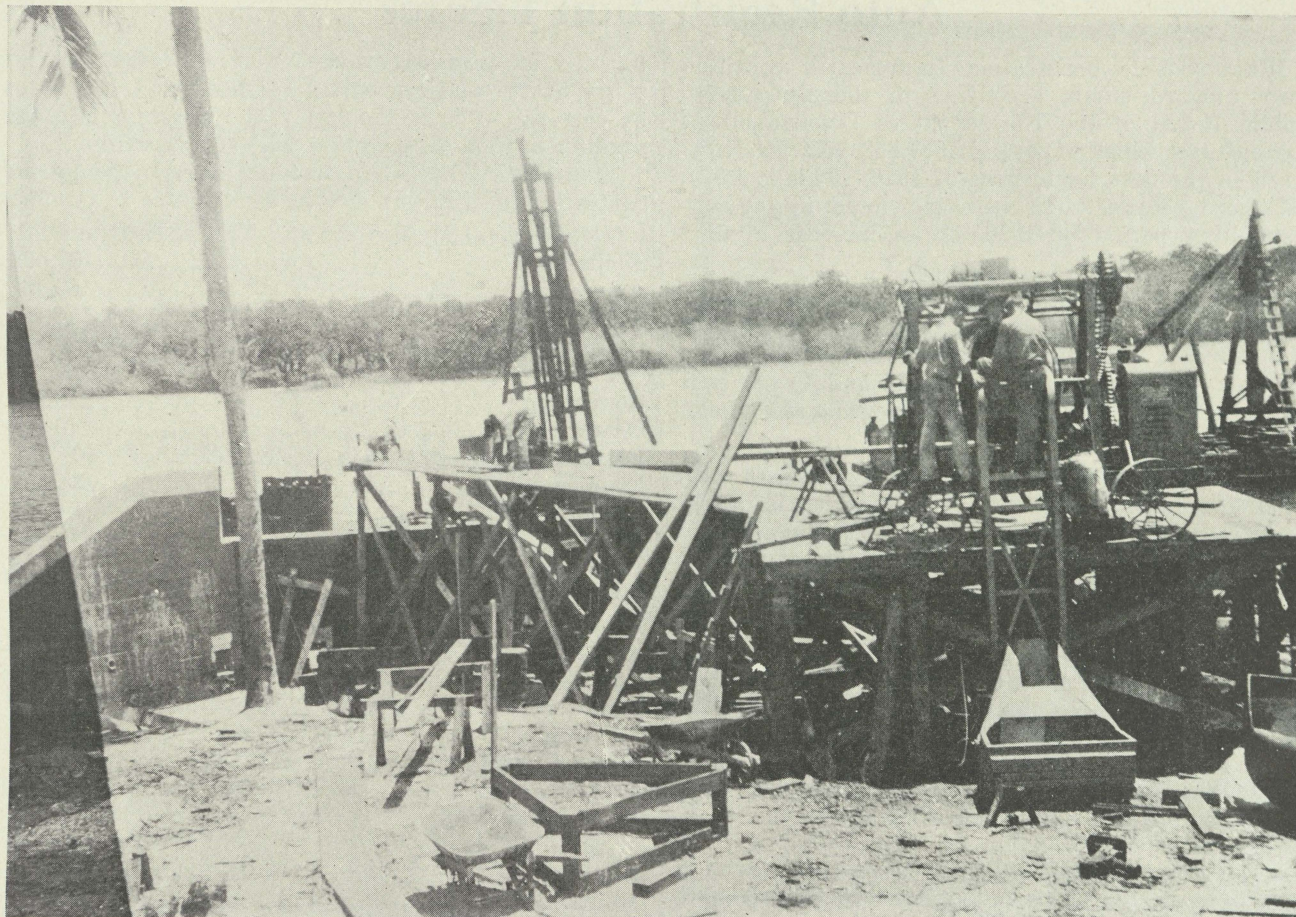
## Did You Know

THAT 65 per cent of the automobile registration is WEST of Cleveland and that from 75 to 80 per cent of the equipment and parts for these automobiles are manufactured EAST of Cleveland?

THAT it was the new cars that paid the larger part of the Federal Automobile Excise Tax this year and that Florida purchased one car for every 15.5 inhabitants? Sixteen other States of the South and West are next in rank.

THAT the spare parts were purchased by the owners of cars and that California leads with a car for every 2.8 persons? Eighteen other Western and Southern States follow next in rank.—American Highways.





Construction of Bridge Over Loxahatchie River—Project 656

## 100 MILES ON A GALLON OF GASOLINE

The automobile of 50 years from now probably will be an enclosed car, of extremely light weight, probably under 1,000 pounds, and will run about 100 miles on a gallon of gasoline, according to Chas. F. Kettering, Director of the General Motors Research Laboratory.

"It all depends on the progress we are able to make in developing a more efficient fuel for our automobile engines," says Mr. Kettering, "but we hope to increase the efficiency of our engines and liberate enough of the energy in a gallon of gasoline by that time so that we can drive a car 100 miles on one gallon of fuel.

"Until recently we have been utilizing only three per cent. of the energy in a gallon of gasoline and throwing away the other 97 per cent. Within the last year we have found a material with which common gasoline can be 'doped' so that we can get just 100 per cent. more mileage out of it, and now we are utilizing six per cent. of the energy and throwing away only 94 per cent. That's throwing away far too much and anyone can appreciate the possibilities which lie ahead of us in this direction alone.

"There's sufficient energy in a gallon of gasoline to carry a light car from St. Louis to Detroit, a distance of 450 miles, but the average light car is making only about 15 miles on that gallon."—Georgia Highways.

## The Hopeful Inventor

I'm inventing a car that will run without gas—  
There'll be a big market for that.

Let every drop from the "vacuum" pass

As well as from back in the vat,

And still it will run till you locate a tank

That carries the fuel you wish—

With proceeds from this I will purchase a bank

And pity the other poor fish.

I'm inventing a car that will run without brains—

Ye gods, what a rush will ensue!

'Twill never run races with passenger trains

Or cop-guarded crossings dash through.

This once on the market, good night to the rest!

The Padillacs, Cackards and all

Must trickle away to the land of the blest

And their makers will go to the wall!—Strickland Gillilan.—Maine Motorist.

### Putting It Gracefully

Corporal—"I hear that the drill sergeant called you a blockhead."

Private—"No, he didn't make it that strong."

Corporal—"What did he actually say?"

Private—"Put on your hat, here comes a woodpecker."—Boys' Life.

The last war was fought to end all wars; the next one will be fought to end all debts.—Life.



## Auto Registration Figures

Motor vehicle registration figures still continue their upward climb, according to the Bureau of Public Roads of the United States Department of Agriculture, which reports 19,697,832 vehicles registered in the first six months of 1926. This is 1,927,141 more vehicles than were registered in the corresponding period of 1925, or an increase of 10.8 per cent.

States showing the greatest increase are Florida 76.2 per cent, Michigan 24.3 per cent, Mississippi 21.0 per cent, Arkansas 19.0 per cent and Oklahoma 16.7 per cent. Increases between 14 and 15 per cent are reported by Georgia, Idaho, Nevada and North Dakota.

Gross receipts from registration fees, licenses, permits, etc., amounted to \$257,779,149 which is nearly all to be used for road purposes. State highway funds were allocated \$179,531,469, local road funds \$48,387,873, and \$20,886,822 is to be used for payments on State and county road bonds.

Motor vehicle registrations and highway traffic have increased enormously in recent years and will undoubtedly continue to increase, but highway officials do not fear the development of a general condition of congestion or any breakdown in the roads constructed by reason of the increased traffic. Highway research and experience have developed types of pavement fully capable of withstanding present and expected future traffic. Eighteen feet has come to be the minimum standard width for main highways and except for roads in the vicinity of large cities and a few heavily traveled roads between certain cities this width will be ample for several years to come. Serious congestion has developed in the vicinity of some of the larger cities; but it is not a general condition, and no problem yet raised by it or likely to be raised in the near future is difficult of solution.

Very satisfactory progress has been made in providing new surfaced mileage to meet the increased traffic. There are 270,653 miles in the State highway systems which include the roads eligible for improvement with Federal aid and all of the important interstate and intercounty roads in the country. At the end of 1925, 145,508 miles of these roads had been surfaced and 32,218 miles additional had been adequately graded and drained. Although 77,000 miles of the surfaced roads are improved only with sand-clay and gravel surfacing, these types are entirely adequate for the accommodation of the present traffic in most instances, and are being replaced by more durable surfaces as the traffic demonstrates the need. This is being done in accordance with the policy of stage construction which has been adopted by most of the States. Under this plan roads carrying light and medium traffic are improved only to the extent justified by the present traffic and the initial improvement is conserved by adequate maintenance and incorporated in the more durable construction when the growing traffic requires a higher type of surface.

In 1925, 17,836 miles of State road were surfaced and 5,316 miles graded and drained. The State highway departments expended a total of approximately \$648,000,000 for this work and the main-

tenance of existing roads. With the exception of a few States where progress has been slow and must be accelerated it is thought that approximately the present rate of construction will be maintained.

The motor vehicle registrations as reported by the States for the first six months of 1926 are as follows:

Grand Total Motor Cars and Trucks Registered	
Alabama .....	197,602
Arizona .....	64,165
Arkansas .....	177,235
California .....	1,459,570
Colorado .....	225,810
Connecticut .....	238,727
Delaware .....	40,303
Florida .....	407,777
Georgia .....	238,618
Idaho .....	84,161
Illinois .....	1,217,265
Indiana .....	630,704
Iowa .....	648,282
Kansas .....	433,561
Kentucky .....	247,104
Louisiana .....	216,500
Maine .....	128,466
Maryland .....	227,491
Massachusetts .....	627,736
Michigan .....	992,178
Minnesota .....	574,356
Mississippi .....	180,030
Missouri .....	583,450
Montana .....	92,340
Nebraska .....	329,669
Nevada .....	20,527
New Hampshire .....	78,979
New Jersey .....	575,237
New Mexico .....	46,571
New York .....	1,562,492
*North Carolina .....	371,353
North Dakota .....	144,079
Ohio .....	1,370,756
Oklahoma .....	490,000
Oregon .....	195,641
Pennsylvania .....	1,326,682
Rhode Island .....	96,652
South Carolina .....	151,012
South Dakota .....	155,763
Tennessee .....	227,775
Texas .....	904,050
Utah .....	81,830
Vermont .....	62,899
Virginia .....	277,125
Washington .....	326,500
West Virginia .....	183,788
Wisconsin .....	590,797
Wyoming .....	44,367
District of Columbia .....	89,867
Total .....	19,697,832

\*All States but North Carolina report details for first six months, 1926. North Carolina has registration year ending June 30th, which full year is used here.—Michigan Roads and Pavements.

Editor's Note: It is interesting to observe in the above table that with the single exception of Texas Florida leads all the States of the south.



Jack Camp, E. F. Fitch, Clarence Camp,  
President. Vice-President. Sec. and Treas.

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and Sized

### CONCRETE ROCK

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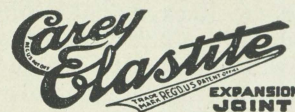
Capacity 1,500 to 2,000 tons daily. Quarry,  
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time—usually within 48  
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and all other classes of Surety Bonds is unsur-  
passed.

### American Surety Company of New York

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H. N. HUTCHINSON, Manager.

#### Protecting the Name

A London taxi driver, putting on a spurt to reach  
a railway station at a certain time, ran down a cart,  
upsetting the contents.

A policeman, confronting the taxi driver, demanded  
his name.

"Michael O'Brien," came the reply.

"Indeed," said the policeman. "That's my name,  
too. Where do you come from?"

"Cork."

"And so do I. Now, just stand there a moment  
while I go over and charge this man with backing  
into ye."

#### BABY CHICKS FOR SALE

Purebred Barron strain, large type white leg-  
horn baby chicks, \$13 hundred.

Brown leghorns, \$15 hundred.

Owens and Donaldson strain Rhode Island  
reds, \$16 hundred.

Thomson's strain Barred Plymouth Rocks,  
\$16 hundred.

White Rocks, \$17 hundred.

Buff Orpingtons, \$17 hundred.

Anconas, \$17 hundred.

All good size purebred stock.

These are Fall and Winter prices, which will  
be lower in the Spring.

We do not ship C. O. D. or accept personal  
check. Remit Money Order. Shipments made  
promptly.

Live delivery guaranteed. Take a statement  
from postmaster if any arrive dead.

#### THE KINGSTON POULTRY CO.

MAYO, FLORIDA

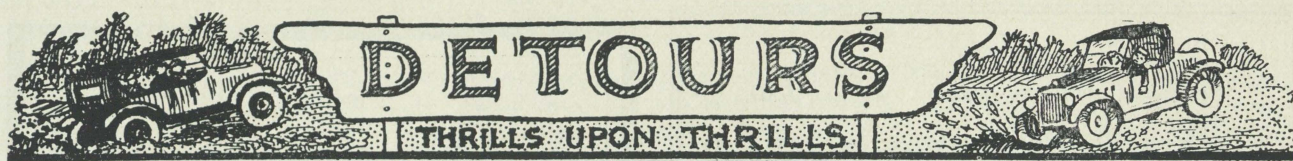
#### Painful Awakening

Waiter—"Did you ask for another cauliflower  
gratin, sir?"

Aberdonian—"Gratin!" Losh, man, I thoct it  
said gratis!"—Punch.

The two Classes that don't know just what the  
people want are: (1) The people's representatives,  
and (2) The people.—Publishers Syndicate.





### Characteristic

Although she has an assortment of hats, she wants a new one.

(That's the woman of it.)

He says he thinks she can get along without it.

(That's the man of it.)

She insists that she can't, and she's going to get it.

(That's the woman of it.)

He says "not if he knows it."

(That's the man of it.)

She breaks down and weeps.

(That's the woman of it.)

He gives in.

(That's the end of it.)

—Judge.

### Three Means of Grace

A negro preacher walked into the office of a newspaper in Rockymount, North Carolina, and said: "Misto Edito', they is forty-three of my congregation which subscribe fo' yo' paper. Do that entitle me to have a chu'ch notice in yo' Sadday issue?" "Sit down and write," said the editor. "I thank you." And this is the notice the minister wrote: "Mount Memorial Baptist Church, the Rev. John Walker, pastor. Preaching morning and evening. In the promulgation of the gospel, three books is necessary: The Bible, the hymn book, and the pocketbook. Come to-morrow and bring all three."—The Christian Register.

### Sure of His Audience

"This is just the place for me,"

Said the humorist at the shore,

"For here whene'er I crack a joke

The breakers simply roar."

—Boston Transcript.

### Beats Padlocks for Checkbooks

Emergency brakes for fountain pens would be a wonderful invention for infatuated millionaires.—Jester.

### More English by Ear

Teacher—"Give me a sentence with the word 'analyze.'"

Small Boy—"My sister Anna says she never makes love, but oh, how Analyze."—Satyr.

### The Best Comes High

Patient (nervously)—"And will the operation be dangerous, doctor?"

Doctor—"Nonsense! You couldn't buy a dangerous operation for forty dollars."—Life.

Our opinion of faith that can be destroyed by the statement of a few scientific facts in a text-book is about the same as our opinion of \$100,000 affections that can be alienated.—Columbus Ohio State Journal.

It may be true, as the scientists say, that stretching is an aid to health, but it doesn't seem to help truth any.—Seattle Times.

### The Real Danger

Aunt Martha (shopping for a parrot)—"Now can you assure me it isn't given to the use of shocking language? Where did you get it?"

Proprietor—"From a sailor, ma'am, but—"

Aunt Martha—"Oh, that's all right—just so you didn't get it from one of those flappers."—Life.

Doubtless after associating with twenty-five or thirty Rising Generations Methuselah ceased entirely to worry about the matter.—Detroit News.

The India Freedom Foundation is raising a fund of \$25,000 to support Senator Copeland's bill which defines Hindus as "white persons." The Hindus are more than welcome into the white race, but we are afraid they will not find it worth the price of admission.—The New Yorker.

### A Valuable Kiss

A new salesman recently was hired who was deeply in love with his wife, but awfully careless about money matters. When he left for his territory, he left his wife rather short of cash, but promised to send her a check—which he forgot to do. The rent came due and she telegraphed:

"Dead broke. Landlord insistent. Wire money."

The husband answered: "Am short myself, will send check in a few days. A thousand kisses."

Exasperated, the wife replied: "Never mind money. I gave the landlord one of the kisses. He was satisfied."—Louisiana Highway.

### Ballad of Go-Getters

I hate to be a kicker, I always long  
for peace,  
But the wheel that does the squeaking  
is the one that gets the grease.

*Sanford Herald.*

You tell 'em, kid—you're peaceful and  
not hard to please,  
But the dog that's always scratching  
is the one that has the fleas.

*Miami Tribune.*

"I hate to be a kicker, means nothing  
in a show;  
The kicker in the chorus is the one  
that gets the dough.

*Youngstown Telegram.*

The art of soft-soap-spreading is a  
thing that palls and stales,  
But the guy who wields the hammer  
is the one who drives the nails.

*Cleveland Plain Dealer.*

The Free Fund is a pippin, and to hog  
it isn't nice,  
But the gang that yells the loudest  
always cops the biggest slice.

*Badger Highways.*



# Consolidated Rock Products Company

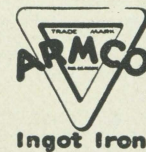
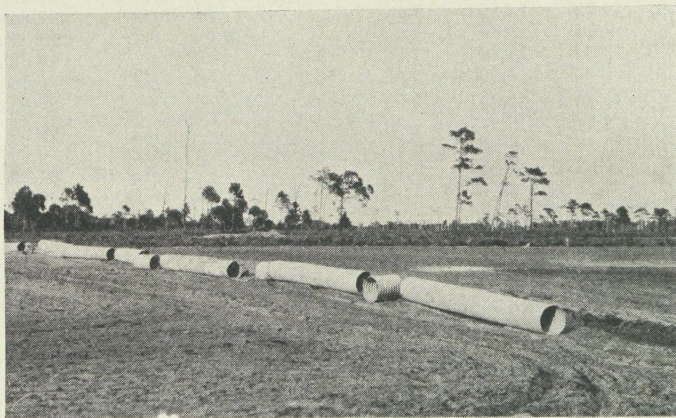
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Rooms 907-917  
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## ARMCO, of course!

When 150 feet of 18" Armco Culvert was laid in this small creek at Venice, Florida, the work took about one-sixth the time that would have been needed to install concrete or tile culvert—and the engineers knew they were installing the culvert of greatest permanency.

For strength, long life and low cost, use Armco for road culverts.

For Information, Write

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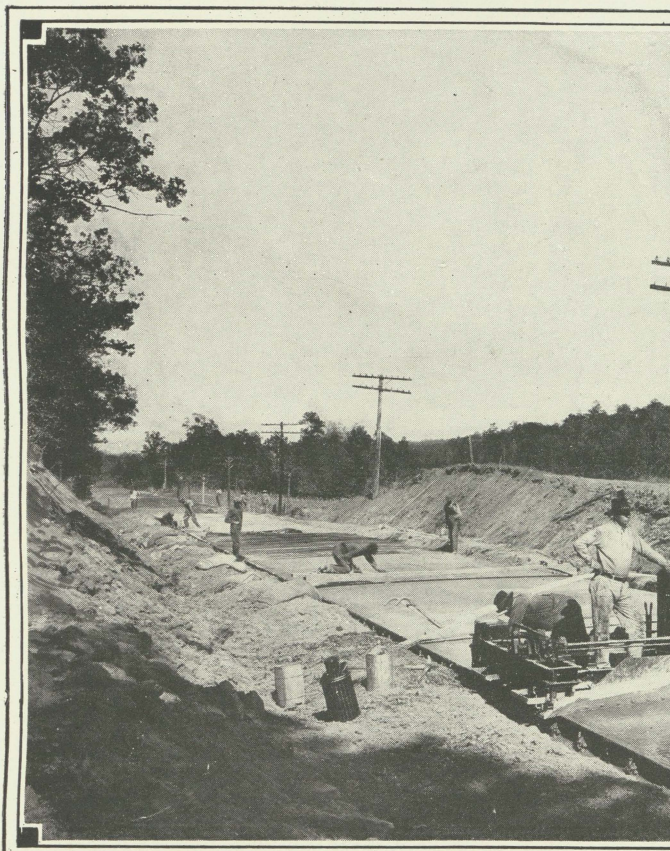


# Status of Road Construction

THROUGH AUGUST 31st, 1926

Project No.	Contractor	Road No.	County	Total Length Miles	Clearing Miles	Grading Miles	Base Miles	Surface Miles	Type	Per Cent Complete	
7	Duval Engr. & Contr. Co....	2	Hamilton .....	13.00			0.00	0.00	S.T.	0.00	
31	Duval Engr. & Contr. Co....	2	Hamilton .....	11.82			11.82	3.54	S.T.	91.00	
40-A	C. F. Lytle.....	4	Brevard .....	16.17	16.17	16.17	16.17	16.17	S.T.	99.00	
41	Morgan-Hill Paving Co....	4	Dade .....	12.00	11.17	10.58	5.29	0.00	S.A.	44.00	
47	Boone & Wester.....	4	St. Johns .....	14.96	14.47	14.00			G.	94.00	
48	A. J. Hoffman.....	4	St. Johns .....	15.94	15.94	13.07			G.	84.00	
49	A. J. Hoffman.....	4	Flagler .....	13.81	11.75	2.76			G.	31.00	
50-B	B. Booth & Co.....	14	Putnam .....	9.77	9.42	7.40			G.	70.00	
50-C	E. Roy James.....	14	Putnam .....	10 03	0.00	0.00			G.	0.00	
51	Noonan-Lawrence .....	7	Escambia .....	6.28	6.28	5.65		6.28	Conc.	95 00	
53-A	B. Booth & Co. ....	2	Lake .....	7.11	6.13	1.77			G.	25.00	
500-A	Noonan-Lawrence .....	20	Bay .....	9.65	8.00	5.00		0.00	Conc.	20.00	
504	Duval Engr. & Contr. Co....	1	Columbia .....	9.41			0.00	0.00	S.T.	0.00	
514	State Convict Forces.....	1	Jackson .....	11.04	4.19	4.08		1.10	S.C.	33.70	
533	Baker & Foulks, Inc.....	1	Suwannee .....	13.47			0.00	0.00	S.T.	0.00	
543	Lake Worth Const. Co.....	3	Seminole .....	14.20	4.26	1.42			G.	11.00	
562-A	H. E. Wolfe.....	8	Highlands .....	5.37			5.00	3.00	S.T.	90.00	
564-C	E. F. Powers Const. Co.....	5	Charlotte .....	3.94	2.36	.79			G.	20.00	
564-B	Broadbent Const. Co.....	5	Charlotte .....	9.73			0.00	0.00	S.T.	0.00	
565	Johnson, Drake & Piper....	1	Madison .....	15 99				0.00	Conc.	0.00	
581	Barnes & Smith.....	5	Hillsborough .....	12.10	12.10	12.10	12.10	12.00	S.T.	100 00	
589	H. E. Wolfe.....	5	Lee .....	8.16			0.00	0.00	S.T.	0.00	
595	L. M. Gray.....	3	Volusia .....	6.43			1.54	0.00	S.T.	24.00	
613	Broadbent Const. Co.....	5	Sarasota .....	4.62	4.62	4.62	4.62	1.28	S.A.	81.00	
614	Walter J. Bryson Pav. Co..	5	Sarasota .....	17.07	4.50	2.00			G.	13.00	
617 & 618	L. M. Gray.....	5	Alachua .....	16.07			10.28	0.00	S.T.	55.40	
621	Penton-Mathis Const. Co..	1	Okaloosa .....	17.35	15.00	12.41			G.	64.40	
623	State Convict Forces.....	35	Madison .....	12.91	12.91	12 00		0.00	S.C.	70.00	
627	L. M. Gray.....	2	Putnam .....	6.27	6.27	6.27	6.27	6.27	S.T.	100.00	
631	E. P. Toulmin .....	1	Washington .....	8.53	8.53	7.07			G.	84.00	
634	State Convict Forces.....	1	Jackson .....	11.07	11.07	11.07		11.00	S.C.	96.00	
641-A	Chas. F. Wilmore.....	4	Palm Beach .....	11.36	9.35	4.01			G.	40.00	
642	F. S. Whitney.....	3	Putnam .....	10.82			7.79	3.00	S.T.	64.80	
644-A	Gillis Const. Co.....	10	Wakulla .....	8.49	7.59	8.15			G.	91.30	
648-A	Federal Contracting Co....	2	Hardee .....	14.17	14.17	12.32			G.	80.00	
648-A	Wm. P. McDonald Const. Co.	2	Hardee .....	1.00	1.00	1.00	1.00	1.00	S.T.	100.00	
651	State Convict Forces.....	10	Gulf .....	14.72	13.25	9.56		.88	S.C.	32.80	
652	Penton-Mathis Const. Co..	33	Okaloosa .....	9.04	9.04	9.04		8.00	S.C.	98.00	
655	(Sec. 1) H. E. Wolfe.....	18	Highlands .....	13.26	13.26	12.86	9.94	3.00	S.T.	97.00	
655	(Sec. 2) H. E. Wolfe.....	18	Highlands .....	5.00	0.00	0.00	0.00	0.00	S.T.	0.00	
657	State Convict Forces.....	6	Jackson .....	10.00	10.00	9.00		8.00	S.C.	85.00	
658	Myers Const. Co.....	1	Holmes .....	8.21	8.21	7.60			G.	89 00	
659	M. C. Winterburn, Inc.....	3	Clay .....	13.27	0.00	0.00			G.	0.00	
660	B. Booth & Co.....	3	Clay .....	10.52	10.09	9.47			G.	81.00	
661	Southern Pav. & Const. Co.	2	Lake .....	3.52	3.52	3.52	3.52	3.52	S.A.	100.00	
663	Taylor Contr. Co.....	5	Citrus .....	8.03	8.03	8.03			G.	100.00	
663	Wm. P. McDonald Const. Co.	5	Citrus .....	8.03			0.00	0.00	S.T.	0.00	
666	State Convict Forces.....	6	Jackson .....	6.52	6.52	6.52		4.00	S.C.	97.00	
668	E. F. Powers Const. Co.....	4	Brevard .....	13.45	4.25	2.00			G.	15.00	
669-B	M. C. Winterburn, Inc.....	27	Dade .....	10.32	10.32	10.32	6.50	0.00	S.T.	75.00	
669-C	R. C. Huffman Const Co....	27	Dade .....	12.00	0.00	0.00			G.	0.00	
669-V	Alexander, Ramsey & Kerr	27	Collier .....	11.91	2.00	1 00			G.	10.00	
669-X	Alexander, Ramsey & Kerr	27	Collier .....	9.39	1.00	.50			G.	5.00	
670	State Convict Forces.....	6	Jackson .....	12.30	12.30	10.50		10.00	S.C.	80.00	
672	State Convict Forces.....	1	Leon .....	9.92	9.92	8.93		8.23	S.C.	90.00	
673	State Convict Forces.....	1	Gadsden .....	9.90	8.00	7.00		3.00	S.C.	60.00	
675	Wm. P. McDonald Const. Co.	17	Polk .....	5.16	5.06	4.90	0.00	0.00	S.A.	24.50	
676-A	Gilbert & Hadsock.....	19	Levy .....	9.95	9.45	4.87			G.	56.00	
676-B	McLeod Constr. Co.....	19	Levy .....	14.39	10 65	8.63			G.	57.00	
676-C	Langston Constr. Co.....	19	Levy .....	13.93	0.00	0.00			G.	0.00	
677-A	A. J. Hoffman.....	13	Levy .....	3.96	0.00	0.00			G.	0.00	
679	Taylor Contr. Co.....	5	Hernando .....	7.12	7.12	7.12			G.	100.00	
679	Wm. P. McDonald Const. Co.	5	Hernando .....	7.12			0.00	0.00	S.T.	0.00	
682	Caye-Andrews Co., Inc.....	5	Citrus .....	6.46	6.46	5.81			G.	89.00	
682	L. B. McLeod Const. Co.....	5	Citrus .....	6.46			0.00	0.00	S.T.	0.00	
693	Boone & Wester.....	4	St. Lucie .....	8.73	8.73	4.05			G.	32.90	
694	C. A. Steed & Sons.....	4	Martin .....	8.48	5.93	2.04			G.	13.00	
Total Complete August 31st, 1926.....				1601.24	1648 38	661.18	1244.14				
Complete Month of August, 1926.....				32.33	31.88	23.00	31.29				
Total Complete July 31st, 1926.....				1568.91	1616.50	638.18	1212.85				
TOTAL MILEAGE COMPLETE											
		Concrete	Brick	B.C.	S.A.	B.M.	Asp. Blk.	S.T.	S.C.	Marl	Total
Complete to July 31st, 1926.....		113.65	17.15	10.74	65.47	89.07	23.20	467.75	459.60	45.86	1,291.59
Complete month of August.....		1.26			1.74			10.88	3.84		17.72
Total to August 31st, 1926.....		114.91	17.15	10.74	67.21	89.07	23.20	478.63	463.44	45.86	1,309.31





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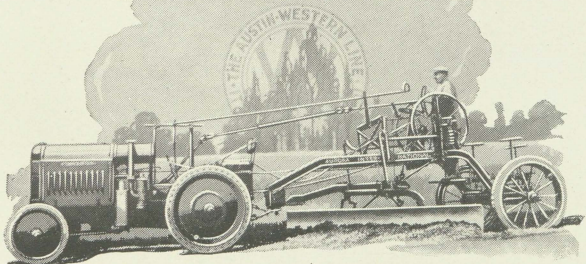
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